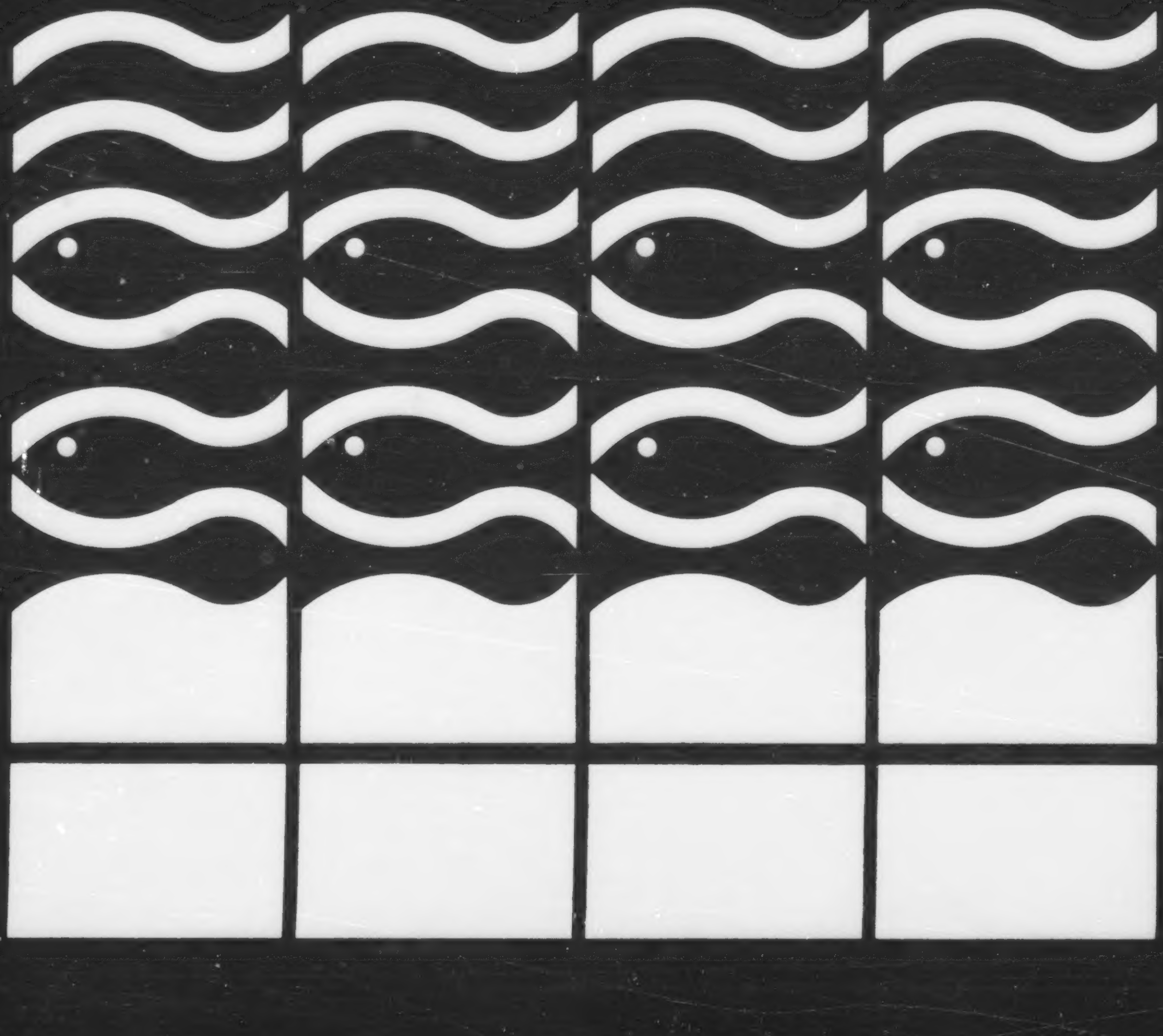
Fishing Industry Advisory Board

Market Report



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GROUNDFISH MARKETS
IN
WESTERN EUROPE

Prepared for
and
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FISHING INDUSTRY ADVISORY BOARD
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FOREWORD

Considering the expected growth in fish landings over the next five years, and recognizing that our traditional markets hold no promise of absorbing the total predicted volume of fish products, and realizing that the Newfoundland Fishing Industry will probably need to adjust its marketing strategies earlier, and to a greater degree than the industries of other Atlantic Provinces with lesser resource potential, the Fishing Industry Advisory Board developed terms of reference for an in-depth study of the Western European groundfish market with special emphasis on products likely to be available from Newfoundland Fisheries.

The Fishing Industry Advisory Board was fortunate in obtaining the services of some of the leaders in their field, in compiling and writing a report which addresses the problems and opportunities to be faced by Newfoundland fish marketers over the next five years.

This report is the result of their efforts, and we believe it offers data and details concerning European Markets which will be valuable to those who are in the fish business and who will need to find additional markets.

Opinions expressed and conclusions reached by the authors are not necessarily endorsed by the Fishing Industry Advisory Board.

FRANK DOPPLINGER,
Chairman.

MARCH, 1980.

Western European Groundfish Market Study

ABSTRACT

Within the context of the variables influencing Western European markets this report examines the supply and demand position for Newfoundland's groundfish and groundfish products in a number of target markets.

The first section of the report is an overview of the marketing factors to be taken into account in choosing target markets and market segments and in developing the marketing strategy. The second section of the report examines in some detail the present and future prospects for species which Newfoundland has on offer and also examines the supply position for competing species and competing producers. The third section profiles the major and lesser Western European markets and indicates short and longer term opportunities within individual markets for a range of Newfoundland groundfish and groundfish products.

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1/ Note, each section and each country profile is numbered separately The whole report is paginated in the bottom of the page numbering sequence.

Western European Groundfish Market Study

General Marketing Considerations

INTRODUCTION

This report has been prepared using statistical information collected specifically for the project and by retrieving data available to the consultants. Visits have been made to fish processors and importers in the U.K., in France and in Germany as well as to the F.A.O. in Rome. The report aims to give an insight into the West European market for potential Newfoundland and Labrador exporters who may not be familiar with Europe and its market for fish.[1/]

Although the report focuses particularly on cod and on the export opportunities for redfish and flounder the overall treatment will allow exporters to set their products in the general context of the markets for fisheries products in the target countries and market segments highlighted in the report. This approach also allows the consultants to point out a number of other market opportunities and for readers to make their own assessments of opportunities not specifically mentioned in the report. The report will, nevertheless, concentrate on the volume market segments as the main species in the report relate to this market.

The report assumes that the growth area for Canadian products will be in the market for frozen fish, whole, in blocks, in individual fillets and in time for processed products, possibly produced in Europe.[2/] The market for dried fish will continue to be important, particularly in Spain and Portugal and there exists a potential for sending high quality fresh fillets to Europe /

1/ Assume that Newfoundland refers to both Newfoundland and Labrador.

2/ Norway lays emphasis on the social responsibility to process at home.

Europe by air. This is important in the light of the competition for Newfoundland's products. Denmark has easy access to the heart of Europe for fresh fish, trucking fish into Rungis market at Paris, France for French and neighbouring markets. Norway is increasing her exports of fresh fish; direct landings of Faroese and Icelandic vessels in West European markets have also increased.

The report should be viewed in the context of a world market for fish having to adapt to an international regime of 200 mile fishing limits. Until 1977, the major fishing nations of Europe had obtained a large proportion of their groundfish supplies from distant waters of Canada, Iceland, the Faroes, Norway and the Soviet Union.

Quite suddenly these nations changed from fish seekers to fish traders. Countries which had seen their waters over-exploited by others were now able to manage their own resources but had to build up their catching power and develop their marketing skills. It is a measure of how quickly competition has developed after the hiatus of 1977 that in the major cod fillet importing market, the U.K., the import price actually fell by 1 per cent against a domestic inflation rate of some seventeen per cent.1/ In addition, those less developed countries which are building up their catching fleets will be looking to Europe as a market for their products.2/

Thus /

1/ Exporters to the U.K. have benefited from the relative strength of the £ sterling which is likely to be maintained on the back of rising North Sea oil production.

2/ The less developed countries of the British commonwealth along with former colonies of the other European Community members are linked together in the A.C.P group of countries which have privileged trading links with the European Community.

Thus we predict increased competition in fishery products, a trend which will not please fish catchers in EC states. However, the large companies which dominate the processing industry will wish to obtain their supplies from the cheapest sources. Increased access to waters such as Canada's attached to tariff reductions on a quota basis appears to be a way forward for fishing interests. On the other hand, fishermen would like to see the privileged position of Iceland reduced. The same extent of feeling does not exist towards Norway and the Faroes in whose waters EC boats still fish.

BACKGROUND TO THE MARKET FOR FISH IN WESTERN EUROPE

The Western European market for groundfish is one of nearly 300 million people, but, in terms of population, it is a stable market only expected to grow by about 3 per cent by 1985. The market, however, is far from homogenous. As the country profiles will show there are both country preferences such as the high demand for cod and haddock in the U.K. or the acceptance of redfish in Germany; the high consumption of fresh fish in some markets, the greater penetration of frozen or smoked and dried fish in other markets arising both from supply availability and tradition. There are, too, market regional variations within countries. Thus, in France, most frozen fish is consumed in Paris and the east of the country. In the U.K. there are also variations in fish consumption, more fish being eaten in the north than the south and more haddock and whiting being consumed in the north. Producers should, therefore, adopt a market segment approach as well as targetting certain country markets within Western Euorpe. Table 1 shows the wide differences in fish consumption world wide.

Factors /

Factors influencing the demand for frozen products include the development of the cold store chain and related distribution and retailing systems, the level of home freezer ownership and the structure of producing and marketing companies which depend on the amount of advertising revenue which can be expended on fish. These factors in turn are influenced by the social and economic conditions of individual markets.

For those exporters unfamiliar with the European market a brief resume of marketing data may serve as a useful background to the country and product discussion. Key factors influencing the demand for frozen foods include the level of living standards, the proportion of women at work, the level of urbanisation and the associated transition from primary to secondary and tertiary occupations.

Table 1 gives a broad indication of fish consumption in the target and other markets.

Table 2 shows the different sizes of the target markets, the wide disparity in populations and in population density and the extent of urban living.

TABLE 1 /

TABLE 1: TENTATIVE ESTIMATES OF PER CAPITA CONSUMPTION OF FISHERY PRODUCTS IN SELECTED COUNTRIES, AVERAGE 1972-74 AND 1975

Country	Average 1972-74				live wt.
	% of total			kg/caput	1975 1/
	Finfish, fresh and frozen	Finfish, processed	Shellfish	All products	
Denmark	45	40	15	34.7	34.6
France	44	30	26	21.5	21.5
West Germany	51	44	5	11.5	11.5
United Kingdom	71	20	9	18.9	17.9
Total EEC	53	32	15	16.2	N.A.
Iceland	N.A.	N.A.	N.A.	66.0	66.8
Norway	N.A.	N.A.	N.A.	47.3	47.2
Portugal	51	45	4	58.5	50.4
Spain	58	16	26	38.5	38.5
Sweden	N.A.	N.A.	N.A.	31.0	29.8
United States	N.A.	N.A.	N.A.	15.7	15.9
Japan	N.A.	N.A.	N.A.	68.8	74.7

Source: F.A.O.

1/ 1975 is the most recent year for which data exists.

TABLE 2 /

TABLE 2: TARGET MARKETS BY AREA, POPULATION, DENSITY OF POPULATION AND EXTENT OF URBAN DWELLING

	Area '000 sq.km.	Pop. 1976/77	Density of pop.	Per cent urban pop.
Belgium	30.5	9.8	322	87.1
France	547.0	53.0	97	70.0
Germany	249.0	61.4	247	82.8
Italy	301.2	56.3	187	54.8
Netherlands	40.8	13.8	338	76.3
U.K.	244.1	55.9	229	76.3
Portugal	92.1	9.4	103	30.4
Spain	504.8	36.2	72	74.4

Thus, Germany at the top of the scale is both the largest individual target market and one of the most urban centred populations. By contrast, Portugal has both the smallest population and the least urban.

Again, in terms of ability to purchase, gross domestic product varies greatly. Although the poorest countries, Spain and Portugal are also the countries where GDP per head has grown most rapidly the standard of living remains markedly lower than in Belgium or Germany for instance as Table 3 shows.

TABLE 3: ECONOMIC INDICATORS

	GDP per head 1977 $ US	Index for 1975 1970 = 100
Belgium	8,940	119
France	7,470	121
Germany	9,270	110
Italy	3,550	111
Netherlands	7,560	118
U.K.	4,210	110
Portugal	1,420	123
Spain	2,370	131

Source: EMDAS 1978/9 p.31.

Growing unemployment in the major economies will hold back income growth. The rising real price of oil and of oil derived products has yet to be passed on to the consumer.
Rising fuel prices will, however, benefit countries such as Canada which can expect to achieve a comparative advantage in the catching of fish.

The extent to which women in the household work will influence the propensity to purchase convenience foods. The type of dwelling she lives in will influence the type of home freezer she may purchase and hence the size of retail pack.

TABLE 4: FEMALE ECONOMIC ACTIVITY AND TYPES OF DWELLING

	Female activity % 1978 estimate	Percentage of households living in flats
Belgium	28.9	48
France	28.8	76
Germany	31.2	55
Italy	21.6	62
Netherlands	18.1	30
U.K.	32.5	18
Portugal	19.5	47
Spain	27.7	60

Source: EMDAS 1978/9 pages 75 and 242.

Thus, one would expect to see a high demand for convenience foods in Germany and the U.K. Countries such as France and Germany where the majority of the population live in flats would tend to purchase smaller packs of food than the U.K., for instance, where less than 20 per cent of the population live in flats. However, the increased emphasis placed on the convenience element of frozen foods rather than bulk buying means that in Britain now, over 50 per cent of frozen food purchases are in packs of less than 2 lbs.1/

Although /

1/ Eurofood 24/5/1979

Although a continuation of the trend towards convenience foods will favour the manufacturers of frozen fish products growth must be achieved against a static demand for food. The demand for frozen food, for instance, in the U.K. is expected to grow only a third as fast in the early eighties as in the early sixties.[1/]

Another factor determining the size of the market for frozen products is the number and type of outlets in a given market and the proportion stocking frozen products.

TABLE 5: GROCERY OUTLETS STOCKING FROZEN FOODS, 1977

	Number of Outlets '000	Proportion Stocking Frozen Foods
Belgium	23	51
France	101	34
Germany	111	87
Italy	170	30
Netherlands	16	85
U.K.	95	87
Spain	117	33

Source: Nielsen Research, 1977

Again the consumer's access to frozen foods in the U.K. and Germany is very apparent. Of course, whilst the number of outlets is important, equally important is the volume of sales per outlet associated with the growth of large self-service stores.

TABLE 6: /

1/ Financial Times Frozen Food Survey 20.7.1979

TABLE 6: SUPERMARKETS 1970, 1973, 1976[1/]

	1970	1973	1976
Belgium	384	657	712
France	1,403	1,934	2,876
Germany	2,045	2,755	4,484
Italy	442	676	945
Netherlands	467	717	1,417
U.K.	4,400	5,140	5,890
Spain	105	N.A.	313

Source: ISSO Report Self-Service 1977

The above figures emphasise the position of the U.K. and Germany but also show the comparative importance of large stores in France. As retailing concentrates so there is a movement towards direct purchase of fish by store groups, by-passing traditional importers.

The United Kingdom, Germany and France are clearly the most important markets in terms of such broad factors as market size, GDP, the use of convenience foods, etc.

Major UK frozen food processors are reported as looking to meat products, cakes and deserts as the main growth areas over the next five years. This trend is reflected, for instance, in the declining proportion of fish in frozen food sales in the U.K. from twenty per cent in 1975 to seventeen per cent in 1978.

Placing /

1/ The figures include superstores. A supermarket is a self-service shop with a selling area of 400 sq. metres or more (2,000 sq. feet in the U.K.).

Placing fish alongside meat the differing trends in the major target markets can be seen.

TABLE 7: CONSUMPTION TRENDS FOR FISH AND MEAT, 1975-1978

Country	Population m.	Consumption of frozen fish + fishery products ('000 tonnes)				Consumption of frozen meat meat products('000 tonnes)			
	1978	1975	1976	1977	1978	1975	1976	1977	1978
France	53.0	45.5	48.4	68.9	79.7 1504g/caput	12.9	21.1	27.1	37.8
G.F.R.	61.3	44.2	48.0	45.6	44.8 732g/caput	2.6	6.3	8.9	8.9
U.K.	55.8	168.1	179.0	158.0	162.0 2900g/caput	*89.0	*97.0	*124.0	*127.0

* Includes Pizza

Source: Deutsches Tiefkuhlinstitut

The figures show that although the U.K. is the largest consumer of frozen fish and fishery products, consumption is in fact declining whilst there has been a continued increase in the consumption of frozen meat and meat products. In the short term the position of fish is expected to deteriorate as rising fuel prices increase fishermen's costs. There is more of a time lag between rising fuel prices and farm gate prices for agricultural products, thus providing an immediate price advantage for meat products. The greater sensitivity of demand to increasing fish prices would tend to accentuate meat's relative advantage.

In Germany, too, frozen fish consumption has stagnated whilst meat products have risen from a low base. Only in France has there been a substantial increase in frozen fish consumption associated with improvements in the frozen food distribution chain, rationalisation of the industry and changing attitudes to frozen /

frozen food forced on the country by the lack of fresh fish.

Traditionally the demand for frozen food has been highest in the northern countries such as Norway and Sweden with much lower demand in the Mediterranean countries where there has been a greater availability of fresh fruit and vegetables in particular.

The purchase of frozen food is associated with the ownership of home freezers and there remains a disparity between the northern and southern countries, however, the three target markets now have a relatively high ownership of freezers about 40 per cent in the U.K. and about 50 per cent in France and Germany.[1/] Surveys have shown that frozen food is increasingly purchased by freezer owners. Since the early seventies price at the consumer level has become the most important factor determining purchase of frozen products. The benefits of bulk buying are increasingly disbelieved by consumers.[2/] Of course, price is not the only factor for the major processor or retailer purchasing fish. Often of equal importance are factors such as reliability of supply, assured and consistent standards of quality and presentation and good packaging.

Technological trends such as reductions in the cost of cold storage construction and developments in mechanical handling such as automation through the use of microprocessing, also the association of microwave cooking and frozen products will have a beneficial effect on the price of frozen foods.

Reason for the low level of quick-frozen groundfish sales, particularly in the U.K. in 1977 and 1978 included the low levels of landings, the consequent high prices and the fact that duties on /

1/ Birds-Eye estimates for 1978. Further statistics on freezer ownership have not been given because of difficulties in estimating replacements and the confusion of fridge freezers and fridges with small freezer compartments.

2/ Eurofood 229 24/5/1979.

on cod and other prime fish imports were not reduced enough to ease the pressure. In the short term as Section two shows the immediate supply outlook is not good and tariff reductions are only partial. In the longer term fish processors forecast ample supplies caught relatively cheaply but in the meantime they have a difficult marketing task in keeping their products on the consumer's regular shopping lists.[1]

European Community fishermen are not assisted by the uncertainty over the outcome of the revised Common Fisheries Policy. The European Commission has proposed a series of measures to restructure the fleets to the changing regime of 200 mile limits. Large funds have been allocated for the scrapping of surplus capacity, for exploiting new fishing resources and for improving marketing structures. Apart from some ad hoc measures taken by the various EC member countries funds for restructuring remain frozen until a Common Fisheries Policy is worked out.[2]

Meanwhile, fish producers are reluctant to invest in the type of vessel required to maximise returns in the new regime as long as they do not know what quotas they will be able to take. Equally processors are reluctant to build new plant and instal new machinery in suitable locations when the structure of the catching sector remains uncertain. However, the concentration of production in the hands of the multinational companies Unilever and Nestle will allow investment to procede as the supply position /

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[1] Financial Times Survey of Frozen Foods 20/7/1979.

[2] The W.F.A. has submitted to the U.K. Government a document entitled The Catching Sector of the Fishing Industry. A Case for Aid. Representatives of the fish processing industry have submitted a similar case entitled Grant Aid for the Fish Processing Industry. Both these documents put forward a case for large injections of cash by the European Community to be matched by national Government.

position clears.[1]

Thus, against a declining share of fish in the total frozen food market and the likelihood of increasing competition, both from alternative foods and from other quality fish suppliers, Newfoundland must aim in the longer term to provide products which compete in price and quality with those offered by other principal exporters including Norway, Denmark, the Faroes and Iceland.

MARKET STRATEGY

The change in fisheries regime has encouraged western European producers to be more conscious of market outlets in neighbouring countries within the European Community. Throughout western Europe exporters can expect to meet strong competition from domestic suppliers and from other third countries in term of quality, price and regularity of supply.

The perishable nature of fish and the fluctuation of supplies can, on occasion, lead to rejection of fish consignments on spurious grounds because their requirements have changed. For this reason exporters should work through large and reputable companies and for the establishment of good personal relationships with buyers.

Of first importance is the reputation of exports which has to be established before large scale exporting begins and which has /

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[1] An indication of the major's commitment to fish can be seen from their advertising expenditure.

UK: Press and TV Advertising Expenditure on Fresh and Frozen Fish (£'000)

	1975	1976	1977
Birds Eye (Unilever)	650	813	1,148
Findus U.K.	230	133	400
W.F.A.	137	104	140

Source: Mintel estimates

has to be maintained. Interviews with processors, particularly in the important U.K. market suggest an unfavourable reputation for Canadian groundfish based on earlier experience of Canadian fish handling practices and the poor initial quality of herring exports following the closure of North Sea grounds.

Today, Canadian herring exports can compare with the best products on offer in Europe and major Canadian groundfish exporters with offices in Europe are working on quality specifications for groundfish with large buyers. Industry and officials should work together in the establishing of codes of practice, adherence to which will enable products of the required quality to be marketed. Appendix 1 contains a number of specifications for the buying of fish prepared by the U.K. White Fish Authority and Torry Research Station.

It is understood that the larger Canadian fish producers have their own agents or sales offices in the U.K. and elsewhere in Europe. Commission business requires a large turnover to motivate the agent towards the seller's products. Where there are numerous small producers looking for a market in Europe much effort can be wasted through competing with each other.

Some form of co-operative marketing organisation has a number of advantages not the least of which is that it can set a product specification and, at little cost to individual processors make use of experienced and effective marketing personnel. Some of the other advantages of co-operative marketing are a lower cost per unit of product, an ability to reach outlets denied to smaller producers, reliability of supply and potential access to a market intelligence system.

The /

The successful export marketing of Norwegian fish products is an example of the benefits of co-operative marketing. Apart from Findus, 4 fishermen's organisations which export fish and the Nordic group which markets fish for some 10 to 15 firms, Frionor markets fish at home and abroad for well over a hundred private producers. As well as their own brand name Frionor have a privileged position in certain export markets where high costs have been experienced in establishing the market. Norwegian exports are assisted by export advisers stationed at embassies abroad. There are fisheries advisers in both London and Paris.[1]

Two locations which may be considered for development of the U.K. and continental market are Grimsby in the U.K. and Boulogne in France. Grimsby is both a major landing and processing port, the centre of a highly developed quick-freezing industry and the starting point for a distribution network to the main population centres. Boulogne as well as being France's number 1 port in volume terms is a developing processing centre with increasing cold storage facilities and has access to a road and rail network to the Paris market, to Belgium, the Netherlands and Germany and to the rest of France.

When companies wish to enter the Western European market or to build up sales in Europe from a low level the most effective method in the absence of a co-operative marketing scheme may be by dealing with customer companies directly. For this reason the report includes names and addresses both of large producers and of other large buyers such as central purchasing agencies and [illegible] chains. This is in addition to information on importers.

To /

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[1] Both Frionor and Findus began marketing in the U.K. through London wholesalers. Both Iceland and the Faroes have co-operative national marketing organisations. Faroya Fiskasola, for instance, the Faroese marketing organisation which markets is products through Iceland's Freezing Plants Corporation in the USA has its own production and marketing facility based at Grimsby distributing products under the Chaldur brand label.

To be able to market their products effectively, exporters are advised to become personally familiar with the packaging and presentation demanded by European importers. This can only be done by comparing products in the market place. Once markets have been established at least annual and preferably more frequent visits to Europe are required.[1]

PACKAGING

Packaging requirements differ markedly for processed and unprocessed products. Frozen, gutted fish is normally presented in glazed blocks which may be wrapped in waxed cardboard or other suitable material. Frozen fillets can be presented in retail or bulk catering packs. In the case of IQF products, the fillets may be boxed loose - especially if the packs are to be broken down for repacking by the buyer - or individually shrink wrapped or vacuum packed. Fillet blocks may be wrapped in a suitable flexible film or in waxed paper.[2]

There have been rapid developments in the packaging of processed products in recent years leading to increased economy, ease of handling and superior presentation. Film wraps, for instance, are now replacing cardboard outers in collating cartons.

Freezing /

1/ The White Fish Authority has conducted successful export missions to France, Germany, Spain and Italy. Such missions give exporters the opportunity to meet a much wider range of importers in a shorter space of time than is possible when an individual arranges a European tour. In the past these missions have included visits to main fishing ports where most importers are located; visits to fish processing factories; to auction markets and to the principal wholesale markets in the country. As well as group meetings with importers the visits set aside periods of free time to allow mission members to pursue individual contacts.

2/ Specifications regarding the suitability of materials used in the packaging of fish products are fully described in the OECD publication Packages and Packaging Material for Fish. OECD 1970.

Freezing allows pack flexibility as the pack need not play a preservative role. Visual appearance is important in the selling of packs from supermarket freezer cabinets. Waxed cardboard cartons are usually used for processed fish products for the consumer expects a high quality presentation for quality food products. Flexible packs are increasing in the home freezer market with the development of boil in the bag products. A new development in fish packaging is the box shaped protective bag which reduces in size as the contents are removed.[1/]

LABELLING

As Greece will join the European Community in January 1981, and as Spain and Portugal have applied to join the Community, the Western European market can be considered as one for labelling purposes. This is especially so as, although the individual members have their own legislation an EC directive aims to harmonise labelling regulations throughout the Community.

The new rules will require the great majority of foodstuffs to be labelled with the name of the food, its weight, an ingredient list, a date mark, any special storage conditions or conditions of use and the name and address of the manufacturer or packer. In addition the origin of the product will have to be declared if its omission might mislead the purchaser and instructions for use should be given if it would not be possible to make appropriate use of the food without them. There is continuing discussion about details of the storage period for frozen fish products, the U.K. preferring to maintain a star marking system for storage in fridges and freezers.

Strict /

[1/] Packaging, January 1979

Strict regulations apply on the marking and labelling of goods for retail sale in Germany which help to make it difficult to sell processed fish products in that market.

The following particulars must be written in German and must be easily visible on the packages or containers: Name of the firm and location of manufacturers' head trading office. Description of contents with metric weight and measurement. Time of manufacture (not in code) of the foodstuffs in terms of day, month and year, or time of packaging or filling instead of time of manufacture, if the foodstuffs have not been packed or filled for the purpose of delivery to the consumer at or immediately after the time of manufacture. The details may be omitted provided that the time (not in code) up to which the foodstuffs are durable is indicated in terms of day, month and year. Storage temperature, together with details of the storage period, i.e. how long a product will keep, in the case of frozen fish or fish products. If non-standard container sizes are used, the unit price (price per kg. etc.), as well as the price per pack. Mercury content: this must be indicated by food processors on labels or packages containing fish products. Local regulations limit mercury content; some provincial regulations prohibit a mercury content in excess of 0.5 per million. A veterinary certificate from the country of origin specifying the mercury content is required.

For Spain, the following information should be printed on all outers:

(a) /

(a) Country of origin
(b) Name of producer or distributer
(c) Commercial and Latin name of the species
(d) Product form
(e) Commercial quality
(f) Freezing date of the product (can be in code)
(g) Net weight (in kilograms).

Goods coming under the common customs tariff numbers 03.01, 03.02 and 03.03 (fresh, chilled, frozen, salted and dried fish and shellfish) require the approval of SOIVRE before they can be allowed to pass through customs. Also, no goods should be shipped to Spain unless the exporter is fully satisfied that an import licence has been granted or that the import declaration has been accepted.[1/]

TARIFFS

Within the European Community fish intended for human consumption and offered by members of recognised producers organisations is withdrawn from the market where it falls below a withdrawal price. Imports into the EC are governed by the Community's Common Customs Tariff.

Where there is a shortfall in the supply of fish for the processing industries there may be a suspension of duties at a certain rate. Where import prices from third countries fall below a reference price based on the lowest prices recorded on representative import markets, net of duties, the EC may suspend imports on products falling below that price.

The reference prices for 1980 for frozen cod and redfish are: /

1/ SOIVRE (Servicio Oficial de Inspeccion Vigilancia y Regulacion de Exportaciones) is the department of the Spanish Ministry of Commerce which is responsible for regulating the minimum quality and commercial conditions under which Spanish imports and exports may enter or leave the country.

are:

Product	Presentation	Reference Price ECU/tonne[1]
Cod	Whole	540
	Fillets	1,390
Redfish	Whole	552
	Fillets	1,150

Source: EEC Reg. No. 3052/79
OJ No. L343, 31.12.1979

Appendix II to this section sets out the details of the Common Customs Tariff on salt water fish. The rates of duty on Canadian, Norwegian, Faroese and Icelandic fish and fish products are compared. For convenience the complete sections 03.01 and 03.02 are reproduced. Appendices IIa and IIb show Spanish and Portuguese tariffs.

The main features are the preferential treatment afforded the Scandinavian exports to the European Community in certain cases and the fact that the preferences vary between the Scandinavian countries. Thus, for whole frozen cod the duty on the Faroes and Canada is 14.6 per cent on Iceland 9.7 per cent and for Norway 1.8 per cent for cod for human consumption. For plaice the duty is the same for all four countries. For cod fillets Canada faces a higher rate of duty in spite of the reduction of duty to 8 per cent within the 10,000 tonne annual tariff quota. For dried, salted or smoked whole cod there is a duty exemption on a Canadian quota of 25,000 tonnes; on fillets Canada faces a 20 per cent duty against total suspension of duty for the other countries.

Imports /

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[1] £1 = 1.61641 ECU as from 1.1.1980.
In general the EC reference and withdrawal prices are set at a low level to allow an ample supply of fish to the processing industry and to prevent the build-up of surpluses which has occurred in the agricultural sector

Imports of fish from Canada into the European Community are competing both with frozen fish from Scandinavia and increasingly with inter Community fresh fish and increases in the Norwegian trade in fresh fish and direct landings by Icelandic and Faroese vessels.

Both in handling her own catch and in considering the EC market Newfoundland producers may wish to consider the grading and quality requirements for fresh fish.[1/]

The size grades are as follows for cod, plaice and redfish.

Size	Cod		Plaice		Redfish[2/] Kg/fish
Size 1	Seven and over	1	0.6 and over	1	Two and over
2	From four up to but excluding seven	2	From 0.4 up to but excluding 0.6	2	From 0.6 up to but excluding 2
3	From two up to but excluding four	3	From 0.3 up to 3 excluding 0.4	3	Less than 0.6
4	From one up to but excluding two	4	Less than 0.3		
5	Less than one				

On the basis of appearance,condition and smell fish is classified by lot in freshness category Extra, A or B. Appendix III sets out the rating system.

[1/] The regulation covering the common organisation of the market is Reg. No. 100/76 contained in OJ No. L20, 28.1.1976.

[2/] Amended as from 1.1.1980, EC Reg. No. 3049/79

Fresh fish which comes within the conditions of the marketing regulations may only be imported (except for direct landings) into the EC if presented in packages on which the following information is clearly and legible marked:-

- Country of origin, printed in Roman letters which are at least 20 mm high;
- Species of fish;
- Presentation;
- Freshness and size categories;
- Net weight in kg. of the fish in the package;
- Date of grading and date of dispatch;
- Name and address of sender.

APPENDIX I

Model purchase specifications and taste panel system

Processors and exporters may find useful the following examples of model purchase specifications prepared by the U.K.'s Torry Research Station and the White Fish Authority primarily intended for U.K. institutional caterers and their suppliers. The Torry taste panel system for assessing freshness is also included.

II

WHITE FISH AUTHORITY/TORRY
MODEL PURCHASE SPECIFICATION

FROZEN FILLETS OF WHITE FISH

A. Scope of this specification

This specification applies to whole fillets purchased frozen, of the following species:

- Cod (*Gadus morhua*)
- Haddock (*Melanogrammus aeglefinus*)
- Whiting (*Merlangius merlangus*)
- Plaice (*Pleuronectes platessa*)
- Lemon Sole (*Microstomus kitt*)
- Saithe (*Pollachius virens*)
- Redfish (*Sebastes sp.*)
- South Atlantic Hake (*Merluccius sp.*)
- Greenland Halibut (*Reinhardtius hippoglossoides*)
- Dover Sole (*Solea solea*)

B. Definition of fillet

Fillets are slices of fish muscle which have been removed from the carcass by cuts made parallel to the backbone and from which all internal organs, head, fins, bones (other than pin bones) and substantially all discoloured flesh have been removed.

C. Specification of product as delivered

The fish on delivery shall meet all of the following requirements:

1. Colour (blemishes)

Bruises and blood clots and other localised discolouration which materially affect the appearance of the fish and/or eating quality shall be absent.

2. Bones, skin and belly lining/flap

The fish shall be free of bones except pin bones. The fish shall be supplied **skin-on/skinless. (Fish which is deemed skinless should contain no more than 10 sq. cm. of skin per 3·2 kg. (7 lb.) unit.)** No more than 15 sq. cm. of belly lining shall be permitted per 3·2 kg. unit. An excessive amount of belly flap must not be present.

3. Worms and other parasites

The maximum tolerance for nematode worms is three worms per 3·2 kg. (7 lb.) unit. No other parasites are permitted.

4. Size of fillets

Individual fillets must be not less than ☐ g. (☐ oz.), **or more than** ☐ **kg.** (☐ **lb.**) each in weight. (Insert required weights.)

5. Eating quality

The fillets must not gape or exhibit abnormal textural faults (*e.g.* due to the use of spent or starved fish) nor must they contain abnormal intrinsic odours or flavours such as "weedy" or "diesel" flavours common in fish from certain grounds at certain seasons.

At the time of delivery the fish must meet the following freshness standard:

A minimum score of 6 in the Torry taste panel system for assessing freshness.

The fillets on cooking must be free of the following:

1 Objectionable cold-storage odours and flavours.
2 Toughness and dryness resulting from cold-storage deterioration.
3 Gelatinous texture.

In the case of cod and haddock the values indicated below on the Torry taste panel system for assessing cold-storage deterioration must not be exceeded.

Cold-storage flavour	3.0
Firmness	4.5
Dryness	3.0

6. Packaging

The frozen fish fillets must be wrapped so that they are protected from bacteriological and other contamination, and from dehydration during storage and transportation.

Any container used for the delivery of frozen fish fillets must be constructed of such material that taint is not imparted to the fillets.

Fillets should be packaged for delivery in units of ☐ kg. (☐ lb.).

7. Temperature at delivery

The temperature of the frozen fish fillets at the time of delivery must be no higher than minus 15 deg. C. (5 deg. F.).

8. Freezing and cold-storage

Freezing must be carried out according to the WFA code of practice for quick freezing. Storage prior to delivery should be at minus 18 deg. C. (0 deg. F.) for no longer than three months. Longer periods of storage must be at minus 29 deg. C. (minus 20 deg. F.). Cold-storage temperatures must not be allowed to fluctuate.

Bold type in Section C of this specification indicates that options are to be exercised by purchasers.

WHITE FISH AUTHORITY/TORRY
MODEL PURCHASE SPECIFICATION

FROZEN PORTIONS OF WHITE FISH

A. Scope of this specification

This specification applies to frozen portions of white fish of the following species:

Cod (*Gadus morhua*)
Haddock (*Melanogrammus aeglefinus*)
Whiting (*Merlangius merlangus*)
Plaice (*Pleuronectes platessa*)
Saithe (*Pollachius virens*)
Redfish (*Sebastes sp.*)
South Atlantic Hake (*Merluccius sp.*)
Greenland Halibut (*Reinhardtius hippoglossoides*)

B. Definition of frozen portions of white fish

Frozen portions of white fish are uniform pieces cut from frozen laminated blocks of skinless and boneless fish fillets. No more than 10% of minced fish may be added during manufacture of the laminated block.

For the purpose of the above definition, fillets are defined as slices of fish which have been removed from the carcass by cuts made parallel to the backbone and from which all internal organs, head, fins, bones and all skin have been removed. Discoloured flesh must be trimmed from the fillets.

C. Specification of product as delivered

The fish on delivery shall meet all of the following requirements:

1. Species	The laminated blocks from which the portions are manufactured shall consist only of the flesh of a single designated species.
2. Colour (blemishes)	Bruises and blood clots and other localised discolouration which materially affect the appearance of the fish and/or eating quality shall be absent.
3. Bones, skin and belly lining/flap	There shall be no bones capable of piercing the soft palate. There is a tolerance of four pin bones or other minor bones and up to 10 sq. cm. of skin per 3·2 kg. (7 lb.) unit of portions. No more than 15 sq. cm. of belly lining shall be permitted per 3·2 kg. An excessive amount of belly flap must not be present.
4. Worms and other parasites	The maximum tolerance for nematode worms is three worms per 3·2 kg. (7 lb.) unit. No other parasites are permitted.
5. Size	The average weight of portions shall be ☐ g. (☐ lb.) but there is a tolerance for individual portions of plus or minus 14 g. (½ oz.).
6. Eating quality	The portions must not exhibit abnormal textural faults (*e.g.* due to the use of spent or starved fish) nor must they contain abnormal intrinsic odours or flavours such as "weedy" or "diesel" flavours common in fish from certain grounds at certain seasons. At the time of delivery the fish must meet the following freshness standard: A minimum score of 6 in the Torry taste panel system for assessing freshness.

The portions on cooking must be free of the following:

1 Objectionable cold-storage odours and flavours.
2 Toughness and dryness resulting from cold-storage deterioration.
3 Gelatinous texture.

In the case of cod and haddock the values indicated below on the Torry taste panel system for assessing cold-storage deterioration must not be exceeded.

Cold-storage flavour	3.0
Firmness	4.5
Dryness	3.0

7. Packaging

The frozen portions must be wrapped so that they are protected from bacteriological and other contamination, and from dehydration during storage and transportation. The frozen portions should also be wrapped so that individual portions may be removed from the package without thawing.

Any container used for the delivery of frozen portions must be constructed of such material that taint is not imparted to the fish.

Each package of portions delivered shall be:

(a) Clearly marked with the name of the product as well as the species used in manufacture.
(b) Clearly marked with the net weight of individual portions and the number of portions in the package.
(c) Clearly marked with the words "IF THAWED DO NOT REFREEZE".

8. Temperature at delivery

The temperature of the fish portions at the time of delivery must be no higher than minus 15 deg. C. (5 deg. F.).

9. Freezing and cold-storage

The portions must be quick frozen according to the WFA code of practice for quick freezing. Storage prior to delivery should be at minus 18 deg. C. (0 deg. F.) for no longer than three months. Longer periods of storage must be at minus 29 deg. C. (minus 20 deg. F.). Cold-storage temperatures must not be allowed to fluctuate.

Bold type in Section C of this specification indicates that options are to be exercised by purchasers.

TORRY TASTE PANEL SYSTEM FOR ASSESSING FRESHNESS

PREPARATION OF SAMPLE: Fish to be tested must be steamed in a closed dish over boiling water for 35 minutes or if frozen for 18 minutes after thawing. The dish should remain covered and be kept in a water bath at 60 deg. C. during testing.

SCORING SYSTEM, COD, HADDOCK, WHITING, COLEY, SOUTH ATLANTIC HAKE

Fresh, sweet flavours characteristic of the species	10
Some loss of sweetness	9
Slight sweetness and loss of the flavour characteristic of the species	8
Neutral flavour, definite loss of flavour but no "off" flavours.	7
Absolutely no flavour, as if chewing cotton wool	6
Trace of "off" flavours, some sourness but no bitterness	5
Some "off" flavours and some bitterness	4
Strong bitter flavours, rubber-like flavour, slight sulphide-like flavours	3
Strong bitterness but not nauseating	1
Strong "off" flavours of sulphides, putrid, tasted with difficulty	0

SCORING SYSTEM, REDFISH

Very sweet or intense sweetness, characteristic flavour	10
Definitely sweet, nutty (Brazil), meaty	9
Loss of sweetness, nutty (Brazil)	8
Very slight sweetness, neutral, milky, chestnut, slight off nut-oil	7
No sweetness, no sourness, tasteless, cotton wool	6
"Off" flavours, bad nuts, herring, some sourness, slight rancidity	5
Strong "off" flavours, strong sourness, some bitterness, rancid oil	4
Strong bitterness, biting rancidity, sulphide flavours	3
Nauseating flavours, difficult to hold in the mouth	2
Nauseating, putrid	1

SCORING SYSTEM, PLAICE

Meaty, shellfishy, earthy	9
Sweet, and meaty, (or oily fresh herring-like)	8
Sweet, meaty with curry, peppery or spice flavour	7
Neutral or bland	6
Rancid, slightly sour	5
Sour and bitter	4
Strong sour and strong bitter, rotten fruit	3
Nauseating	1

APPENDIX II

Import Duties on fish entering the E.E.C.

Heading Number	Description	RATE OF DUTY INTO E.E.C.			
		from Faroes %	from Iceland %	from Norway %	from Canada %
03.01	Fish, fresh (live or dead), chilled or frozen:				
	A. Freshwater fish:				
	I. Trout and other salmonidae:				
	a) Trout	12	12	12	12
	b) Salmon	c	c	c	3.8
	c) Lake white fish	0	0	0	8
	d) Other	0	0	0	10
	II. Eels	4.8d	4.8d	4.8d	4.8
	III. Carp	8a	8a	8a	8
	IV. Other	0	0	0	0
	B. Saltwater fish:				
	I. Whole, headless or in pieces:				
	a) Herring:				
	1. From 15 February to 15th June:				
	aa) Fresh or chilled	0	0	0	0
	bb) Frozen	0	0	0	0
	2. From 16 June to 14 February:				
	aa) Fresh or chilled	c	c	c	15c
	bb) Frozen	c	c	c	15c
	b) Sprats:				
	1. From 15 February to 15 June	0	0	0	0
	2. From 16 June to 14 February	c	c	c	13

a) Subject to compliance with the reference price. A countervailing tax is provided for in the case of non-compliance with the reference price.

b) See Annex.

c) Total suspension for an indefinite period.

d) Duty exemption within the limits of an annual tariff quota of 34,000 tonnes to be granted by the competent authorities and subject to compliance with the reference price.

II.

Heading Number	Description	RATE OF DUTY INTO E.E.C. from Faroes %	from Iceland %	from Norway %	from Canada %
03.01 (cont'd)	B. I. c) Tunny:				
	1. For the industrial manufacture of products falling within heading No. 16.04(a):				
	aa) Whole:				
	11. Yellow-finned tunny:				
	aaa) Weighing not more than 10 kg each	b	b	b	22 c, d
	bbb) Other	b	b	b	22 " "
	22. Long-finned tunny	b	b	b	22 " "
	33. Other	b	b	b	22 " "
	bb) Gilled and gutted:				
	11. Yellow-finned tunny:				
	aaa) Weighing not more than 10 kg each	b	b	b	22 c, d
	bbb) Other	b	b	b	22 " "
	22. Long-finned tunny	b	b	b	22 " "
	33. Other	b	b	b	22 " "
	cc) Other (for example, "heads off"):				
	11. Yellow-finned tunny:				
	aaa) Weighing not more than 10 kg each	b	b	b	22 c, d
	bbb) Other	b	b	b	22 " "
	22. Long-finned tunny	b	b	b	22 " "
	33. Other	b	b	b	22 " "
	2. Other				
	d) Sardines (Clupea pilchardus Walbaum):				
	1. Fresh or chilled	*23	*23	*23	23
	2. Frozen	*23	*23	*23	23
	e) Sharks	b ø	b ø	b ø	8 e
	f) Redfish (Sebastes marinus):				
	1. Fresh or chilled	8	8(c2%)	8(c2%)	8
	2 Frozen	8	8(c2%)	8(c2%)	8
	g) Halibut (Hippoglossus vulgaris, Hippoglossus reinhardtius)	1.6	ø 0	ø 0	8
	h) Cod (Gadus morrhua or Gadus callarias):				
	1. Fresh or chilled	14.6	1)14.6	2)14.6	14.6
	2. Frozen	14.6	1)14.6	2)14.6	14.6
	ij) Coalfish (Pollachius virens or Gadus				
	1. Fresh or chilled	15	1)15	15	15
	2. Frozen	15	1)15	15	15

a) Entry under this subheading is subject to conditions to be determined by the competent authorities.

b) Total suspension for an indefinite period.

c) Subject to compliance with the reference price. A countervailing tax is provided for in the case of non-compliance with the reference price.

d) Duty exemption in respect of tunny intended for the canning industry, within the limits of an annual tariff quota of 30,000 tonnes to be granted by the competent authorities and subject to compliance with the reference price. Qualification for this quota is governed by conditions to be determined by the competent authorities.

e) Duty rate reduced to 6% in respect of piked dogfish Squalus acanthias within the limits of an annual tariff quota of 5,000 tonnes to be granted by the competent authorities.

* Duty suspended 1.9.79-31.3.80 for fish of this species 20 cm or more in length (whole).

ø Suspension until 30.6.1980.

1. Reduced to 3.7%.
2. reduced to 1.8% for cod for human consumption.

III.

Heading Number	Description	RATE OF DUTY INTO E.E.C.			
		from Faroes %	from Iceland %	from Norway %	from Canada %
03.01 (cont'd)	B. I. k) Haddock:				
	1. Fresh or chilled	15 ø	15 ø	15 ø	15
	2. Frozen	15 ø	15 ø	15 ø	15
	l) Whiting (Merlangus merlangus):				
	1. Fresh or chilled	15	15	15	15
	2. Frozen	15	15	15	15
	m) Mackerel:				
	1. From 15 February to 15 June				
	aa) Fresh or chilled	0	0	0	0
	bb) Frozen	0	0	0	0
	2. From 16 June to 14 February				
	aa) Fresh or chilled	20	20	20	20
	bb) Frozen	20	20	20	20
	n) Anchovies (Engraulis spp):				
	1. Fresh or chilled	15	15	15	15
	2. Frozen	15	15	15	15
	o) Plaice:				
	1. Fresh or chilled	15	15	15	15
	2. Frozen	15	15	15	15
	p) Sea-bream of the species Dentex dentex and Pagellus:				
	1. Fresh or chilled	15	15	15	15
	2. Frozen	15	15	15	15
	q) Other	15 +	15 +	15 +	15 +
	II. Fillets:				
	a) Fresh or chilled	18 ø	18 ø	18 ø	18
	b) Frozen:				
	1. Of cod (Gadus morrhua or Gadus callarias)	3	15 ø	15 ø	15b
	2. Of coalfish (Pollachius virens or Gadus virens)	3	15 ø	3 reserve price	15
	3. Of haddock	3	15 ø	3 " "	15
	4. Of redfish (Sebastes marinus)	3	14.6	14.6	14.6
	5. Of tunny	18	0	18	18
	6. Of mackerel	15	15	15	15
	7. Other	15 ø	15 ø	15 ø	15
	C. Livers and roes	*	*	*	10
03.02	Fish, dried, salted or in brine; smoked fish, whether or not cooked before or during the smoking process:				
	A. Dried, salted or in brine:				
	I. Whole, headless or in pieces:				
	a) Herring	5	5	5	12
	b) Cod	0	c	c	13d

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a) Duty rate reduced to 8% for silver hake (Merlucius bilinearis) within the limits of an annual tariff quota of 2,000 tonnes to be granted by the competent authorities.

b) Duty rate reduced to 8% within the limits of an annual tariff quota of 10,000 tonnes to be granted by the competent authorities.

c) Total suspension for an indefinite period.

d) Duty exemption within the limits of an annual tariff quota of 25,000 tonnes to be granted by the competent authorities.

ø 3.7% under a reference price from Faroes 1.8% for fish for human consumption.

+ Fresh sturgeon + Aquarium fish duty free.

* Duty suspended until 30.6.80.

IV.

Heading Number	Description	RATE OF DUTY INTO E.E.C.			
		from Faroes %	from Iceland %	from Norway %	from Canada %
03.02 (cont'd)	A. I. c) Anchovies (Engraulis spp)	0	a	a	10
	d) Common halibut (Hippoglossus vulgaris)	15	15	15	15
	e) Salmon, salted or in brine	4 ø	4 ø	4 ø	11
	f) Other	12	12	12	12
	II. Fillets:				
	a) Of cod	a	a	a	20
	b) Of salmon, salted or in brine	15	15	15	15
	c) Of lesser or Greenland halibut (Hippoglossus reinhardtius), salted or in brine	15	15	15	15
	d) Other	15p	16p	16p	16
	B. Smoked, whether or not cooked before or during the smoking process:				
	I. Herring	10	10	10	10
	II. Salmon	13	13	13	13
	III. Lesser or Greenland halibut (Hippoglossus reinhardtius)	15	15	15	15
	IV. Common halibut (Hippoglossus vulgaris)	16	16	16	16
	V. Other	14	14	14	14
	C. Livers and roes	11 ø	11 ø	11 ø	11
	D. Fish meal	13	13	13	13

a) Total suspension for an indefinite period.

b) See Annex.

ø Rate reduced from 11% to 4% until 30.6.80.

p Herrings 5%

APPENDIX IIa

Import duties on fish entering Spain (1)

Heading Number	Description	European Community Preference List	Import Duty	Reduced Rates of Duty	Compensation Tax
03.01	Fish, fresh (live or dead) chilled or frozen:				
	A. Live:				
	1) Ornamental	A	Free *	-	7%
	2) Other	A	Free *	-	7%
	B. Fresh or chilled (whole, headless or in pieces, except in fillets):				
	1) Salmonidae	A	Free *	-	7%
	2) Flat fish (Pleuronectidea, Bothidea, Cynoglossidae, Soleidae, spp)	A	Free *	-	7%
	3) Tunny (Thunnus, Neothunnus or Parathunnus and Euthynnus, spp):				
	a) Albacore (Thunnus alalunga)	A	Free *	-	7%
	b) Other	A	Free *	-	7%
	4) Bonito and the like (Sarda, Auxis and Orcynopsis, spp)	A	Free *	-	7%
	5) Mackerel and the like (Scomber, spp)	A	Free *	-	7%
	6) Other fish	A	Free *	-	7%

(1) Goods on European Community Preference List A are subject to a 60 per cent reduction on current import duties.

The goods are also subject to import licences and Compensation Tax. A reduced rate of duties applies until 26.4.1980.

* If imported between 1st March and 15th August will pay 5 pesetas per kg. net.

Heading Number	Description	European Community Preference List	Import Duty	Reduced Rate of Duty	Compensation Tax
03.01 (cont'd)	C. Frozen (whole, headless or in pieces, except in fillets):				
	1) Salmonidae 13.0%	-	15%	13.0	8%
	2) Flat fish (Pleuronectidae, Bothidae, Cynoglossidae and Soleidae, spp) 13.0%	-	15%	13.0	8%
	3) Tunny (Tunnus, Neothunnus or Parathunnus and Euthynnus, spp):				
	a) Albacore (Thunnus alalunga) 5.4%	A	6%	5.4	8%
	b) Other 5.4%	A	6%	5.4	8%
	4) Bonito and the like (Sarda, Auxis and Orcynopsis, spp) 5.4%	A	6%	5.4	9%
	5) Mackerel and the like (Scomber, spp) 13.0%	-	15%	13.0	8%
	6) Other fish 13.0%	-	15%	13.0	8%
	D. Fillets, whole or cut in pieces:				
	1) Fresh or chilled	A	Free	-	8%
	2) Frozen 13.0%	-	15%	13.0	8%
	E. Livers and roes:				
	1) Fresh or chilled	A	Free	-	8%
	2) Frozen 13.0%	-	15%	13.0	8%

APPENDIX IIb

Import duties on fish entering Portugal (1)

Heading Number	Description		Maximum tariff escudos or ad val.	Minimum tariff escudos or ad val.
03.01	Fish, fresh (live or dead), chilled or frozen:			
	NOTE: These products shall be duty-free when imported by national preserved fish manufacturers for use exclusively in their own factories, subject to the approval of the General Directorate of Foreign Trade. Importers shall record the quantities imported in a special register and shall supply the Customs with all details necessary to the verification of use and the control of stocks. The use of such products for another purpose than that stipulated above shall be considered as an evasion of the payment of the duties provided for under the subheadings of this heading.			
	Tunny:			
	01 Imported during the months of September to January	kg	0 04	0 04
	02 Imported during the other months	kg	2 00	1 00
	03 Cod	kg	0 80	0 40
	04 Sardines	kg	0 30	0 15
	05 Fish not specified	kg	1 60	0 80
03.02	Fish, dried, salted or in brine; smoked fish, whether or not cooked before or during the smoking process:			
	01 Dried cod	kg	1 20	0 60
	02 Edible roes	kg	1 20	0 60
	03 Fish not specified	kg	6 40	3 20

---

(1) European Community members pay tariffs at the preferential rate shown. There is also a general clearance fee of 0.8 per cent CIF value and a 15 per cent turnover tax.

Imports valued at more than 5,000 Escudos CIF must be registered in advance and approved by the Director General of Commerce.

APPENDIX III

Freshness Ratings

Marketing standards are hereby laid down for the following species of salt water fish, falling within sub-heading ex 03.01 B I of the Common Customs Tariff, with the exception of fish which is live, frozen or in pieces.

Cod	(Gadus morrhua)
Coalfish	(Pollachius virens)
Haddock	(Melanogrammus aeglefinus)
Whiting	(Merlangius merlangus)
Plaice	(Pleuronectes platessa)
Redfish	(Sebastes marinus)
Mackerel	(Scomber scombrus)
Herring	(Clupea harengus)
Sardines	(Clupea pilchardus Walbaum)
Anchovies	(Engraulis encrasicolus)
Hake	(Merluccius sp.p.)

The freshness category of each lot shall be determined on the basis of the freshness rating of the fish and a number of additional requirements.

The freshness rating shall be defined by reference to the scale set out in Annex A which covers the following aspects:

(a) appearance

(b) condition

(c) smell

Each part examined shall be awarded marks corresponding to the freshness criteria indicated in the scale. The arithmetic mean of the marks awarded shall indicate the freshness rating.

1. On the basis of the above provisions, fish shall be classified by lot in Freshness Category 'Extra', A or B.

Freshness Category 'Extra':
The freshness rating of the fish in this category shall be 2.7 and over. The fish must be free from pressure marks, injuries, blemishes and bad discoloration.

Freshness Category A:
The freshness rating of fish in this category shall be 2 and over but less than 2.7. A very small proportion of fish with slight pressure marks and superficial injuries shall be tolerated. The fish must be free from blemishes and bad discoloration.

Freshness Category B:
The freshness rating of fish in this category shall be 1 and over but less than 2. A very small proportion of fish with more serious pressure marks and slight injuries shall be tolerated. The fish must be free from blemishes and bad discoloration.

2. When the products are being classified by freshness category the presence of parasites shall also be taken into consideration, allowance being made for the type of product, the fishing ground in which it was caught and its presentation.

III.

ANNEX A

FRESHNESS RATINGS

Parts of fish inspected	CRITERIA			
	Marks			
	3	2	1	0
	APPEARANCE			
SKIN	Bright, iridescent pigmentation; no discoloration; Aqueous, transparent mucus	Pigmentation bright but not lustrous; Slightly cloudy mucus	Pigmentation in the process of becoming discoloured and dull; Milky mucus	Dull pigmentation (1); Opaque mucus
EYE	Convex (bulging); Transparent cornea; Black, bright pupil	Convex and slightly sunken; Slightly opalescent cornea; Black, dull pupil	Flat; Opalescent cornea; Opaque pupil	Concave in the centre (1); Milky cornea; Grey pupil
GILLS	Bright colour; No mucus	Less coloured; Slight traces of clear mucus	Becoming discoloured; Opaque mucus	Yellowish (1); Milky mucus
FLESH (cut from abdomen)	Bluish, translucent, smooth shining; No change in original colour;	Velvety, waxy, dull; Colour slightly changed	Slightly opaque	Opaque (1)
COLOUR ALONG THE VERTEBRAL COLUMN	Uncoloured	Slightly pink	Pink	Red (1)
ORGANS	Kidneys and residues of other organs should be bright red, as should the blood inside the aorta	Kidneys and residues of other organs should be dull red; blood becoming discoloured	Kidneys, residues of other organs and blood should be pale red	Kidneys (1), residues of other organs and blood should be brownish in colour
	CONDITION			
FLESH	Firm and elastic; Smooth surface	Less elastic	Slightly soft (flaccid), Less elastic; Waxy (velvety) and dull surface	Soft (flaccid) (1); Scales easily detached from skin, surface rather wrinkled, inclining to mealy
VERTEBRAL COLUMN	Breaks instead of coming away	Sticks	Sticks slightly	Does not stick (1)
PERITONEUM	Sticks completely to flesh	Sticks	Sticks slightly	Does not stick (1)
	SMELL			
GILLS, SKIN, ABDOMINAL CAVITY	Seaweed	No smell of seaweed or any bad smell	Slightly sour	Sour (1)

(1) Or in a more advanced state of decay.

Source: EEC Regulation 103/76
O.J. No. L20, 28.1.1976

Section 2

The Supply Position

In this section, data on catches of Atlantic groundfish species by the major producing countries are compared with total allowable catch allocations and, when available, projections of future catches for these species. This information was reviewed in an attempt to assess how the supply position in each country or groups of countries has changed during recent years in order to identify those countries which might provide new or increased marketing opportunities for Newfoundland groundfish products and for potential competitors.

The Supply Position

SUPPLY OF GROUNDFISH IN ATLANTIC WATERS:

In an attempt to assess on one hand, likely future markets for Newfoundland groundfish products and, on the other hand, countries presently competing with Newfoundland in these markets or likely to do so, information has been reviewed on recent catches by major Atlantic groundfish producing countries or groups of countries. Where available, data on likely future catches were also reviewed to try to assess future trends in these.

The term groundfish is relatively unfamiliar in Europe but has been taken to be roughly equivalent to the term "demersal" as used in the United Kingdom namely, fish which live on the sea bottom and which are caught chiefly by bottom trawls and Danish seines and which are intended for human consumption rather than for industrial use. In northern Europe and North America a large number of species are classified as demersal ones but a relatively small number of species account for the bulk of the demersal catches. Some species are identical on both sides of the Atlantic while others are found either exclusively or largely in the North East or the North West Atlantic or in the case of the hakes, in the south as well as the north Atlantic. In these cases, the species selected for review were those caught by Newfoundland fishermen and found to be acceptable either whole or processed as substitutes in international trade. Appendix A shows the common and scientific names of the principal species considered in this analysis.

All species of groundfish considered in this analysis are relatively long-lived organisms and normally, several different year classes occur together in the commercial catches. Year classes /

classes vary in strength from year to year because of natural factors (temperature, salinity, etc.). Such variations can be quite marked, however, the effect of this phenomenon on the total catches is partly and usually largely evened out by the presence in them of perhaps 10-15 different year classes of varying strengths. Thus, natural factors are not normally major causes of trends in catches of groundfish species. The most important causes of these trends are the fisheries themselves.

The information used in the analysis of the fisheries was obtained from a variety of sources as indicated on the appropriate tables. It consists of catches by major species and by major North Atlantic fishing countries during recent years, data on recommended total allowable catches (TACs) for 1979 and 1980 for those species for which TACs have been allocated and for some species projected catches during the nineteen eighties.

Although the data are the most complete available to the authors, they are subject to some limitations. For example, catch data from different sources sometimes show different quantities for what should be the same item. Such differences are usually small and do not affect the general conclusions reached in this chapter. More serious is the fact that TACs are frequently exceeded or not achieved either because of inadequate management of the fisheries, because of policy changes during the course of the year or because the fleet is incapable of catching the allocated quantity. It is believed that the effect of these limitations to the data is to render the final conclusions somewhat imprecise but not to render them invalid.

For various reasons, projections of likely long-term catches are only available for a relatively small number of stocks of a few species. These data are especially scarce in the case of the /

the north east Atlantic fisheries. The main reason for this is that these stocks are fished by vessels from several different countries not all of which collect data adequate enough to enable projections to be made. A further difficulty arises from the fact that agreement among the countries participating in the fishery is often difficult to achieve on the most desirable exploitation policy for the stocks,for example, in the cases of over-exploited ones to aim for quick or longer term recovery.

The problem of making projections is further complicated by the fact that north east Atlantic countries formerly fished partially on grounds which are now within the exclusive economic zones of other countries. Since the fishing fleets were adapted for this purpose, the countries involved in this activity wished to retain at least partial fishing rights on these grounds to allow time for the restructuring of these fleets to better take advantage of the changing fishing opportunities. Attempts have been made to make agreements along these lines with varying degrees of success. Even where agreements have been reached, they usually only operate for periods of a year or less. In other significant cases no agreement has been reached, such is the case of the failure of the member states of the European Economic Community to achieve a Common Fisheries Policy. This fact has caused serious difficulties in relation to negotiations between the Community of its member states and third countries.

Further uncertainties have been created by a relatively recent trend among Eastern and Western European countries for their vessels to fish for hake in the South Atlantic under licensing and/or joint venture agreements with the countries of the /

the region and for some of these countries such as Argentina and Uruguay to rapidly increase their domestic fisheries and catches of hake and other species.

For all of the above reasons, it will be clear that a redistribution has occurred of national catches of groundfish species and that this trend is still continuing to the extent that the forecasting of future catches especially by European countries is an uncertain business.

CATCHES OF ATLANTIC GROUNDFISH BY MAJOR SPECIES:

Table 1 shows catches of the major Atlantic groundfish species by all countries. During the period shown, the total catch of all the species shown declined by about 1.6 million tonnes. Each year, Atlantic cod was the most important species accounting for between 35% in 1976 and 40% in 1974 and 1978. As in the case of the total of all species, cod catches showed a steady decline over the period with an overall decline of about 640,000 tonnes between 1974 and 1978.

In the case of the hakes, the second most important group of species, the catches varied from year to year with no clear evidence of an upward or downward trend. The hakes accounted for between 16% and 23% of the total.

In importance, the hakes are followed by saithe, haddock, redfish and whiting although the relative importance of each of these varies from year to year. In 1978, the total catches of these four species together with those of hakes and cod accounted for 88% of all species shown (89% in 1974).

Table /

Table 2 shows the catches by country of the more important groundfish species during 1978. It shows that the U.S.S.R. was the major producer during that year with about 13% of the total. Cod, redfish and hakes together account for about 86% of the total U.S.S.R. catch.

Norway was the second most important groundfish producing country followed by Canada. In each of these cases, cod accounted for more than half of the total catches.

NORTH WEST ATLANTIC CATCHES:

Newfoundland

Newfoundland catches of all major species of fish and shellfish are shown in Table 3. It shows that while catches of each of the major groups (groundfish, pelagic and estuaral and shellfish) and the total of all fish and shellfish increased during the period, trends varied in the case of individual species. The biggest increases occurred in the case of cod, Greenland halibut, mackerel and squid.

Between 1974 and 1976, groundfish accounted for about 76% of all catches whereas this percentage dropped to about 71% during 1977 and 1978. During each year, cod was the major component of these groundfish catches accounting for 44% in 1974 and rising to 53% in 1978 and more than doubling in weight terms.

Table 4 presents preliminary estimates of likely future catches of groundfish in the waters adjacent to Newfoundland Province. There are several sources of uncertainty about such estimates including those mentioned in the footnotes and also the entry into the fishable stocks of one or more unusually large (or small) year classes would require upward or downward revisions to /

to be made. It is certain, however, that Newfoundland fishermen will have greatly increased fishing opportunities in the nineteen-eighties. The extent to which the fishermen will take up these opportunities will depend upon the extent to which fishing capacity can be increased to exploit the greater quantities available and upon markets, mainly export ones, being found for these catches. The major scope for increased catches in the nineteen-eighties over the averages for 1974-78 occurs in the case of cod with much lesser opportunities in the cases of Greenland halibut, small flatfishes and redfishes. An important feature of these expected increases in availability of resources is that they are expected to be achieved not only through the total or partial exclusion from the fishery of vessels from countries which formerly fished off the coast of Newfoundland but also through the application of rigid management practices. The strength of year classes entering the fishery will vary somewhat from year to year hence some "fine-tuning" will be required in the application of management measures but if current policies are continued as seems likely, groundfish catches should eventually stabilise and thereafter vary very little from year to year. Moreover, it appears to be the present intention of the Canadian Government that entry into the fishery be carefully controlled to the extent that the catching capacity of the fleet should be related to the availability of the resources. Catch rates should, therefore, be high compared to those on fishing grounds where restrictive licensing is not applied hence the fishery would be expected to be relatively profitable.

In /

In addition to Newfoundland, the other east coast provinces of Canada are important producers of fish hence these provinces are competitors with Newfoundland for export markets for their products. All of these provinces lie to the south of Newfoundland hence the relative importance of the different species in the catches vary from that of the Newfoundland ones with lower representation of those species such as Greenland halibut, a typically Arctic or sub-Arctic species and higher representation of species such as haddock and hakes which largely are more southerly species.

Maritimes and Quebec Provinces:

A comparison between Tables 3 and 5 shows the differences in species mix among the groundfish which was mentioned above especially the greater significance of the haddock catches by the non-Newfoundland provinces. The other major difference between the data shown in the two tables is that in both, the total catches of groundfish showed an increase between 1974 and 1978, the increase in the case of Newfoundland amounted to about 71% while that of the other provinces was 27%

Projections of future TACs for groundfish species in the waters adjacent to the non-Newfoundland provinces are shown in Table 6. As estimates of future catches in these provinces, they are subject to the same uncertainties as those mentioned for future Newfoundland catches, but it is believed that they can be used to give a rough indication of the catches which might be expected in the nineteen-eighties.

Table 6 suggests that the non-Newfoundland provinces have considerably less scope for increasing their groundfish catches in the nineteen-eighties than has Newfoundland, by perhaps 44% over the 1974-78 average in the case of the former provinces and by about 284% in the case of Newfoundland. The table further suggests that catches of cod, redfish and flatfishes may actually decline /

decline and that major increases are likely to be obtained through greater utilisation of hake and other groundfish some of which are at present little sought after and sometimes discarded and which, in the past, have largely been exploited by foreign flag vessels.

Others:

The discussions so far have been confined to those stocks which lie wholly within Canada's fishery management area. In addition to these, Canadian fishermen have some degree of access to stocks straddling the outer limit of the country's 200 mile zone, Canadian boundaries with the U.S.A. and France and stocks which lie completely outside the 200 mile limit on the Flemish Cap. In the case of the more northerly grounds notably, Davis-Strait-Baffin Bay area and the Flemish Cap, there is even more uncertainty than for those stocks which lie wholly within Canada's 200 mile limit and over the stocks and recommended long term TACs and as to future allocations by different participating countries. For these grounds, the following TACs were assigned for 1979:

David Strait-Baffin Bay	Tonnes
Greenland halibut	25,000
Roundnose grenadier	8,000
Flemish Cap	
Cod	40,000
Redfish	20,000
American plaice	2,000

During 1978, no Canadian catches of groundfish from Davis Strait-Baffin Bay area were reported while for Flemish Cap area during that year Canadian catches were about 4,600 tonnes of which about 4,000 tonnes were caught by Newfoundland fishermen (out of a total of about 52,600 tonnes by all countries).

The /

The principal fishing ground jointly managed by U.S.A. and Canada is Georges Bank (sub area 5). In 1978, Canadian groundfish catches amounted to about 26,000 tonnes (Newfoundland - 352 tonnes) out of a total of about 200,000 tonnes by all countries. Although enquiries have been made at this time of writing, it has not been possible to obtain projected TACs for Georges Bank nor information on what Canada's share is likely to be.

United States:

United States catches of groundfish are shown in Table 7. In fact, almost all of these quantities were taken off the New England states and these species do not extend much further south than this region. The total catches showed a moderate but fairly steady increase during the period shown attributable chiefly to the catches of cod, haddock, hakes, saithe and American plaice. Catches of yellowtail flounder actually declined during the period. Although enquiries have been made to appropriate agencies, at the time of writing, it has not been possible to obtain information on projections of future catches. It does appear, however, that the main scope for increasing U.S.A. groundfish catches lies in the further exclusion of foreign flag vessels and the greater utilisation by the U.S. fleet of resources formerly exploited by the foreign ones. The groundfish species most likely to be affected by such action would be the red and silver hakes. For 1978, the optimum yield of these two species was 133,500 tonnes yet, during that year actual U.S. catches of these species was 30,300 tonnes compared with a total of about 94,000 tonnes by all countries.

NORTH EAST ATLANTIC CATCHES:

As has been mentioned earlier, the failure of the European Community to establish a Common Fisheries Policy for the Community has not only made it impossible to predict future catches by the member /

member countries for more than a short period in the future but has also affected the Community's negotiating position with third countries for reciprocal fishing rights. Despite these facts, it was felt to be worthwhile to examine recent catches by the major producing countries or groups of countries to find out how these have been affected by the extension of fishing limits and other management measures.

Since hake fishing is somewhat of a special case, the fisheries for these species will be dealt with in a separate section.

France:

French groundfish catches are shown in Table 8. The total catches declined by 12% during the period shown largely caused by a decline in cod catches. The catches of other species varied relatively little from year to year. Most of the decline in cod catches can be attributable to loss of fishing opportunities in the north east Arctic. Unlike other countries as will be seen later, during the five years until 1978, French catches from the north west Atlantic varied very little from year to year. Since both Canada and the United States have expressed their intentions of expanding their fleets, it seems likely that French vessels will eventually be excluded from the north west Atlantic with a loss at 1978 catch rate of about 30,000 tonnes of cod or almost half of the total cod catch in 1978.

West Germany: /

West Germany:

Between 1974 and 1978, West German catches of groundfish declined by about 32% (Table 9) attributable largely to declines in the catches of cod and haddock and, since 1976, saithe. About 36% of the decline in cod catches during the period shown occurred in the north west Atlantic. The remainder is attributable to the north east Atlantic and especially to the north east Arctic and Iceland grounds although these losses were partly offset by the more than doubling of the North Sea catches of cod. Even if the western German fleet is totally excluded from the north west Atlantic, the north east Arctic and Iceland, the effect of German cod catches after 1978 compared with 1978 ones will be significant but less marked than would be true in the case of France since these grounds subsequently were relatively less important to Germany.

Most of the decline, between 1974 and 1978, in haddock and saithe resulted from losses of fishing opportunities in the north east rather than the north west Atlantic and especially in the north east Arctic and Iceland. Total exclusion from these grounds and from the north west Atlantic would result in a loss in the combined catches of cod, haddock and saithe of about 34,000 tonnes or about 14% of the total groundfish catches in 1978.

Portugal:

Table 10 shows that the marked decline in groundfish catches (about 75%) between 1974 and 1978 was almost entirely to the decline in cod catches. Almost the entire Portuguese catch of cod was taken in the north west Atlantic. As the U.S.A. build up their fleets, it seems to be their intention to phase out foreign fishing hence it would seem that even the relatively small 1978 quantity of about 20,000 tonnes would seem to be vulnerable to loss.

Spain:

Table 11 shows the now familiar picture of a decline in groundfish catches (of about 23%) largely caused by a decline in those of cod although, between 1977 and 1978, assisted by those of saithe. Between 1974-78, cod catches in the north west Atlantic declined from about 98,000 tonnes to about 17,000 tonnes. Judging from what has been said, it would seem that the 17,000 tonnes is vulnerable to loss. North east Atlantic catches of cod increased from about 9,000 tonnes in 1974 to 57,000 tonnes in 1978 (although this latter figure seems highly suspect bearing in mind a 1977 catch of 14,000 tonnes and the fact that Spanish fishing opportunities where cod occurs were largely confined to the waters around the U.K. and southern Ireland) in some cases under special licensing arrangements with the EC. The latter catches were further reduced during 1979 and present indications are that this will also be true during 1980. Thus Spain's future groundfish hopes seem to depend on the hakes. These will be discussed in a later section.

United Kingdom:

In the case of the U.K., cod is once again the major species in the groundfish catches and also once again, the catches declined (by 53%) between 1974 and 1978. It has been several years since the U.K. relied to any significant extent on catches from the north west Atlantic hence exclusion from these grounds would have a minimal effect on the total landings or of any other groundfish species formerly caught there. More serious is the case of partial or total exclusion from the north east Arctic, Iceland and Faroes. In 1974, 223,000 tonnes of cod were caught by U.K. vessels on these grounds while in 1978, the catch only amounted to about 35,000 tonnes. In the future, even that quantity is uncertain.

In /

In the case of haddock, the second most important groundfish species, again north west Atlantic catches were insignificant. Catches of haddock from the north east Arctic, Iceland and the Faroes amounted to about 50,000 tonnes in 1974 but only about 7,000 tonnes in 1978. A similar trend occurred in the case of saithe. These trends in the case of cod, haddock and saithe catches were largely the cause of the decline in total groundfish catches of 226,000 tonnes (about 36%) between 1974 and 1978.

Future groundfish catches will depend principally upon three factors, firstly, its allocations under a settlement of the Common Fisheries Policy, secondly, the Community's own allocations from TACs and thirdly, agreements with third countries. The first of these is the most critical since, although more than 60% of the Community's exclusive economic zone lie within 200 miles of median lines of the U.K. coastline, its Community partners are presently unwilling to allocate that share of the common fisheries resources to the U.K. Negotiations are continuing and there now seems that a settlement will be reached in the not too distant future. Further information on this topic will be discussed in a later section.

Scandinavia and Netherlands:

Being net exporters of groundfish and hence unlikely to be future targets for Newfoundland exports, the catches of these countries have been grouped. These are shown in Table 13. The table shows that total catches of groundfish remained fairly stable during the period shown with declines in haddock, whiting and saithe catches being compensated for by an increase in cod catches. Since none of these countries relied to any significant extent on north west Atlantic fishing they were not affected by exclusions from those fishing grounds. In the longer term future, /

future, the combined catches of the countries shown are likely to increase since three of the major producers in the group, Iceland, Norway and Faroe now exercise a greater control than formerly over the resources within their 200 mile zones. In the short term, catches may remain stable or even decline, as will be seen later, because of the need to exercise restraint to allow over-fished stocks to recover.

Eastern Bloc:

Although the consultants were not required specifically to deal with Eastern Bloc fisheries, it was felt that the picture would be incomplete if they were not given at least a brief mention. The combined catches of the major Eastern Bloc producing countries are shown in Table 14. Total groundfish catches declined by about 1.3 million tonnes (54%) between 1974 and 1978. All major species contributed to the decline which was caused by exclusions from grounds of both the north east and north west Atlantic. Since the countries shown have relatively short Atlantic coastlines and the "excluding" countries are major producing ones, it seems to be unlikely that north Atlantic catches will return to earlier levels. Prospects may be better in the south Atlantic and these will be examined in a later section.

MAJOR NORTH EAST AND SOUTH ATLANTIC GROUNDFISH RESOURCES:

Hake:

In terms of future European catches, the most unpredictable of the Atlantic groundfish catches are the hakes. Only about 10% of the total Atlantic hake catches are taken in European waters the remainder being taken in the south Atlantic off the African and South American coasts. These south Atlantic resources are exploited by some European countries, and especially by Spain, Poland, U.S.S.R. and West Germany through licensing agreements with coastal states. Such agreements are usually for relatively short /

short periods and clearly the danger exists that these agreements will not be renewed after the coastal state build up their own fleet capacity. That this is happening can be seen by the fact that between 1975 and 1978, the combined hake catches of Argentina and Uruguay increased from 119,000 tonnes to 382,000 tonnes.

Further uncertainty about future hake catches arises from the fact that, in the south Atlantic, some of the major resources occur off the coasts of developing countries which can only operate relatively modest resource assessment programmes hence the potential of the resources is poorly known.

The north Atlantic resources of hake are believed to be overfished causing restrictions to be placed on the fishery so that 1980 catches are expected to be only about 40,000 tonnes compared with 111,000 tonnes in 1978.

Other Species:

Unlike the case of the Canadian groundfish resources, few long term projections have been attempted for north east Atlantic species. Even short term projections can be unreliable partly, for example, because of the custom of some countries to allow TACs to be exceeded. This happened in the case of cod off Iceland in 1979 when the TAC was set at 280,000 tonnes while the actual catch was reportedly 330,000 tonnes. The scope for this happening is clearly greater in the case of countries like Iceland which has control of its own resources and the Government can act unilateraly, and less when resources are shared by two or more countries. There can be good biological reasons for TACs to be adjusted upwards or downwards since the assessments of the state of the stocks are done continuously and discussed at regular intervals by groups of biologists. On the other hand, some evidence exists to suggest that, in the past, governments bowed to industry pressure and allowed higher TACs than those recommended by the biologists. This kind of action can be justified by the fact that the biological stock assessments cannot /

cannot be absolutely precise.

For these reasons, due to the fact that no settlement has yet been reached of the EEC Common Fisheries Policy nor of pending proposals for increases of mesh sizes, it is impossible to predict future groundfish catches by individual countries. With the exception of catches by U.S.S.R. and Norway from the north east Arctic, and some North Sea species, it would appear that future total catches will be roughly similar or slightly higher than those of 1978. In the case of the north east Arctic the recommended TAC for cod for 1980 is 390,000 tonnes compared with 600,000 tonnes in 1979 and for haddock 50,000 tonnes in 1980 compared with 206,000 tonnes for 1979. Such drastic cuts should allow stocks to build up relatively quickly. In the case of the North Sea, long term prospects for cod are estimated to be 300,000 tonnes compared with the 1980 TAC of 200,000 tonnes, 90-95 thousand tonnes for haddock compared with a 1980 TAC of 69,000 tonnes and 180,000 tonnes for whiting compared with the 1980 TAC of 100,000 tonnes. These estimates of long term prospects include discards which, in the case of the whiting, are perhaps about 50,000 tonnes per year, a quantity which should decline if mesh sizes are increased.

TABLE 1: ATLANTIC CATCHES OF MAJOR[1/] GROUNDFISH SPECIES

'000 tonnes, live wt.

Species	1974	1975	1976	1977	1978
American plaice	94	83	97	89	95
Atlantic cod	2,812	2,435	2,387	2,271	2,172
Atlantic redfish	421	601	689	430	322
Common sole	35	36	33	33	29
European plaice	146	146	157	169	145
Greenland halibut	134	130	102	94	103
Grenadiers	55	64	34	32	42
Haddock	582	530	515	404	338
Hakes	1,437	1,290	1,476	1,328	1,253
Lings	77	67	78	74	73
Megrim	21	23	24	21	23
Saithe	755	704	751	545	459
Tusk	49	36	41	38	38
Whiting	264	222	281	195	206
Wachna cod	33	33	28	41	41
Witch flounder	41	37	36	30	25
Yellowtail flounder	51	44	29	30	30
Total	7,007	6,481	6,758	5,824	5,394

1/ Greater than 20,000 tonnes in 1978

Source: F.A.O.

TABLE 2 : ATLANTIC CATCHES OF MAJOR GROUNDFISH SPECIES BY PRINCIPAL PRODUCING COUNTRIES DURING 1978

'000 tonnes, live wt.

Country	American Plaice	Atlantic Cod	Atlantic Redfish	European Plaice	Greenland Halibut	Grenadiers	Haddock	Hakes[1/]	Lings	Saithe	Whiting	Total major species
Belgium	-	19.5	1.5	6.8	-	-	2.1	0.2	0.7	1.1	3.5	35.4
Canada	77.4	296.5	73.2	-	38.0	+	43.1	10.9	-	27.5	-	566.6
Denmark	-	133.0	-	52.2	-	-	13.1	1.8	1.2	12.8	64.9	279.0
Faroe Is.	-	53.2	3.2	0.3	1.1	-	20.8	-	3.3	21.2	1.0	104.1
France	+	65.0	5.4	3.8	+	-	9.1	22.4	20.5	74.2	44.9	245.3
East Germany	+	14.6	17.2	1.2	6.2	1.8	0.4	4.8	-	8.9	+	55.1
West Germany	5.7	76.9	50.2	5.2	9.7	8.9	4.2	16.4	5.2	45.9	0.6	228.9
Greenland	-	39.6	0.7	-	6.0	+	-	-	-	-	-	46.3
Iceland	-	319.7	33.5	4.5	11.3	+	40.6	-	4.7	44.3	0.1	458.7
Netherlands	-	49.4	+	32.2	-	-	0.9	+	0.1	5.8	11.2	99.6
Norway	-	401.8	7.9	0.7	4.2	-	42.7	0.4	28.3	140.3	0.1	626.4
Poland	0.2	69.3	3.7	-	5.8	0.1	0.1	30.3	-	5.7	+	115.2
Portugal	-	19.7	4.0	-	-	-	+	21.3	-	0.2	2.6	47.8
Spain	0.1	74.6	N.A.	-	-	-	0.6	227.5	4.0	3.0	2.0	311.8
Sweden	-	17.3	+	0.5	-	-	1.4	0.2	0.4	1.0	0.4	21.2
United Kingdom	+	151.4	3.5	35.7	0.5	-	94.1	2.0	-	36.4	64.8	388.4
U.S.A.	9.5	39.2	16.1	-	-	-	17.9	30.3	4.6	17.7	-	135.3
U.S.S.R.	1.7	318.3	100.8	-	20.3	31.1	46.1	256.8	-	11.0	0.5	786.6
Others	0.5	13.4	1.5	1.9	-	0.1	1.2	627.9[2/]	-	2.1	9.6	658.3
Total	95.1	2172.4	322.4	145.0	103.1	42.0	338.4	1253.2	73.0	459.1	206.2	5209.9

[1/] In the case of "hakes", South Atlantic species have been included

[2/] Includes 341.2 tonnes for Argentina and 143.1 tonnes for South Africa

Source: F.A.O.

TABLE 3 : CATCHES OF MAJOR SPECIES OF FISH AND SHELLFISH LANDED IN NEWFOUNDLAND AND LABRADOR, 1974-78

'000 tonnes, live wt.

Species	1974	1975	1976	1977	1978
Atlantic cod	83.3	77.5	119.6	141.8	170.4
American plaice	70.4	39.7	61.1	55.7	57.1
Redfish	24.8	40.9	40.1	31.1	39.1
Greenland(turbot) halibut	6.0	8.1	9.7	19.0	25.5
Yellowtail flounder	*	19.1	10.1	11.3	15.8
Witch flounder	*	5.4	10.9	13.9	8.1
Haddock	0.4	0.3	0.2	0.7	2.1
Other groundfish	4.1	2.9	4.5	4.5	4.4
Total groundfish	189.0	193.9	256.2	278.0	322.5
Herring	34.7	42.5	48.9	50.3	44.3
Capelin	15.4	4.6	9.6	13.5	17.0
Atlantic mackerel	1.9	3.1	5.4	7.9	13.6
Skate	0.8	0.2	0.5	1.1	1.8
Salmon	2.0	2.0	2.0	1.9	1.1
Other pelagic and estuaral	0.3	0.1	0.2	0.4	0.3
Total pelagic and estuaral	55.1	52.5	66.6	75.1	78.1
Squid	+	3.2	9.9	29.7	43.0
Queen crabs	3.4	2.0	2.7	3.9	7.6
Shrimp	0.5	1.4	1.5	3.4	3.6
Lobsters	1.3	1.7	2.3	2.2	2.5
Other Shellfish	0.4	+	+	0.2	+
Total Shellfish	5.6	8.3	16.4	39.4	56.7
Total fish and shellfish	249.7	254.7	339.2	392.5	457.3

* Included with American plaice

Sources: Canadian Government, Government of Newfoundland and Labrador.

TABLE 4 : ACTUAL NEWFOUNDLAND AND LABRADOR CATCHES OF MAJOR SPECIES OF GROUNDFISH COMPARED WITH PROJECTED TACs FOR THESE SPECIES IN WATERS ADJACENT TO THE PROVINCE1/

'000 tonnes, live wt.

Species	Nfld. catch	Projected TACx in sub-areas 2, 3 and 4 RS				Change between average 1974-78 and 1985	
	Average 1974-78	1979	1980	1981	1985	'000 t.	%
Greenland (turbot) halibut	13.7	30	35	35	35	+ 21.3	+155
Small flatfishes	75.7	109	110	115	123	+ 47.3	+ 62
Atlantic cod	118.5	355	412	460	613	+494.5	+417
Atlantic redfishes2/	35.2	104	118	119	120	+ 84.8	+241
Roundnosed grenadier	N.A.	35	30	30	30	N.A.	N.A.
Other groundfish	4.8	30	30	30	30	+ 25.2	+525
Total groundfish	247.9	663	735	789	951	+703.1	+284

1/ No official decision has yet been made as to the share of these TACs will be allocated to provincial vessels nor is it known how much of that share is likely to be landed in provincial ports. It is also possible that some shares of the TACs may be allocated to foreign countries.

2/ Excludes TACs for sub-area 4RST not yet determined.

Source: Department of Fisheries and Oceans,
Government of Canada.

TABLE 5 : ATLANTIC CATCHES OF MAJOR GROUNDFISH SPECIES BY CANADA, EXCLUDING NEWFOUNDLAND AND LABRADOR, 1974-78

'000 tonnes, live wt.

Species	1974	1975	1976	1977	1978	Average 1974-78
Greenland (turbot) halibut	0.9	1.3	1.8	3.9	12.5	4.1
Halibut	1.0	1.0	1.0	1.0	1.3	1.1
Small flatfishes	28.4	27.7	27.8	29.7	27.8	28.3
Atlantic cod	73.5	68.4	74.0	95.6	126.1	87.5
Haddock	14.4	19.2	19.1	26.2	40.9	24.0
Hakes	12.5	11.7	9.8	10.5	9.7	10.8
Saithe (pollock)	25.1	26.5	23.1	25.7	27.0	25.5
Tusk (cusk)	5.7	5.5	3.2	3.4	5.3	4.6
Atlantic redfish	62.9	62.0	49.6	35.5	34.0	48.8
Other groundfish	4.5	3.7	4.1	5.7	5.0*	4.6
Total	228.9	227.0	213.5	237.2	289.6*	239.2

* Estimated

Source: Newfoundland and Canadian Government Statistics and F.A.O.

TABLE 6: ACTUAL CATCHES OF MAJOR SPECIES OF GROUNDFISH BY EAST COAST PROVINCES OTHER THAN NEWFOUNDLAND COMPARED WITH PROJECTED TACs[1/] FOR THESE SPECIES IN WATERS ADJACENT TO THESE PROVINCES

'000 tonnes, live wt.

Species	Catch Canada Other Than Nfld.	Projected TACs in Gulf of St. Lawrence (4T) and Scotian Shelf (4VWX)				Change Between Average 1974-78 and 1985	
	Average 1974-78	1979	1980	1981	1985	'000 t	%
Atlantic cod	87.5	68.5	78.5	74.5	68.5	- 19.0	- 22
Haddock	24.0	28.0	29.0	30.0	31.0	+ 7.0	+ 29
Atlantic redfishes	48.8	20.0	25.0	25.0	30.0	- 18.8	- 39
Silver hake	10.8	70.0	70.0	70.0	70.0	+ 59.2	+ 548
Saithe (pollock)	25.5	30.0	35.0	38.0	40.0	+ 14.5	+ 57
Flatfishes	33.5	14.0	14.0	14.0	14.0	- 19.5	- 58
Other groundfish	9.1	75.0	75.0	80.0	90.0	+ 80.9	+ 889
Total groundfish	239.2	305.5	326.5	331.5	343.5	+104.3	+ 44

Source: Canadian Government Statistics

1/ Includes quantities which may be landed in Newfoundland and which may be allocated to foreign flag vessels and partially excludes catches which may be allocated to Canadian fishermen in areas which are jointly managed by U.S.A.

TABLE 7 : ATLANTIC CATCHES OF MAJOR GROUNDFISH SPECIES BY U.S.A., 1974-78

'000 tonnes, live wt.

Species	1974	1975	1976	1977	1978	Average 1974-78
American plaice	2.0	2.5	3.5	7.0	9.5	4.9
Summer flounder	6.4	7.6	10.8	8.9	8.5	8.4
Winter flounder	7.3	7.7	6.7	10.5	12.2	8.9
Yellowtail flounder	25.0	19.5	17.2	16.5	11.4	17.9
Other flatfish [1/]	2.1	4.5	4.4	3.8	4.1	3.8
Atlantic cod	26.6	25.5	25.3	34.3	39.2	30.2
Haddock	3.7	7.4	5.8	12.9	17.9	9.5
Hakes	18.4	24.3	28.0	27.3	30.3	25.7
Saithe	8.9	9.5	10.9	13.1	17.7	12.0
Other roundfish [2/]	6.7	4.8	4.7	6.2	6.8	5.8
Atlantic redfishes	18.8	14.5	14.6	15.9	16.1	16.0
Total	125.9	127.8	131.9	156.4	173.7	143.1

1/ F.A.O. species group "31"

2/ F.A.O. species group "32"

TABLE 8: ATLANTIC CATCHES OF MAJOR GROUNDFISH SPECIES BY FRANCE, 1974-78

'000 tonnes, live wt.

Species	1974	1975	1976	1977	1978	Average 1974-78
Common dab	2.4	2.4	2.0	2.8	2.0	2.3
Common sole	4.4	4.5	5.2	4.0	4.4	4.5
European plaice	3.5	3.6	3.2	3.5	3.8	3.5
Megrim	6.0	6.6	7.5	6.9	7.1	6.8
Other flatfish[1]	2.0	1.1	1.9	2.5	4.0	2.3
Atlantic cod	97.9	78.8	74.7	66.5	65.0	76.6
Haddock	20.4	20.5	20.2	15.4	9.1	17.1
Hakes	23.0	24.2	20.9	18.0	22.4	21.7
Lings	23.2	15.5	27.2	26.0	20.4	22.5
Pollack	-	-	-	5.3	7.5	2.6
Pouting	10.3	9.7	9.7	7.9	8.5	9.2
Saithe	80.7	70.2	85.8	86.0	74.2	79.4
Whiting[2]	41.2	43.9	44.8	40.6	44.9	43.1
Other roundfish[3]	1.1	1.4	1.3	0.9	1.4	1.2
Atlantic redfishes	2.5	2.2	3.5	3.2	5.4	3.4
Total	318.6	284.6	307.9	289.5	280.1	296.2

1/ F.A.O. species group "31"
2/ Small quantities taken in Mediterranean Sea
3/ F.A.O. species group "32"

Source: F.A.O.

TABLE 9: ATLANTIC CATCHES OF MAJOR GROUNDFISH SPECIES BY WEST GERMANY, 1974-78

'000 tonnes, live wt.

Species	1974	1975	1976	1977	1978	Average 1974-78
Greenland halibut	2.6	2.1	3.3	6.7	9.7	4.9
Plaice (European)	3.6	4.4	4.5	5.9	5.2	4.7
Other flatfish[1/]	3.4	3.3	3.4	5.6	9.3	5.0
Atlantic cod	161.9	113.7	109.2	92.3	76.9	110.8
Grenadiers	0.2	0.3	0.1	1.0	9.1	2.1
Haddock	28.1	19.7	21.3	9.9	4.2	16.6
Hakes	0.6	+	11.8	8.0	16.4	7.4
Lings	6.2	7.2	4.1	4.9	5.2	5.5
Pollack	0.2	0.1	0.1	0.2	0.2	0.2
Saithe	79.2	79.7	105.7	61.2	45.9	74.3
Whiting	0.7	0.9	0.4	0.6	0.6	0.6
Other roundfish[2/]	0.6	0.7	0.5	0.4	4.9	1.4
Atlantic redfish	60.3	56.4	56.4	88.5	50.2	62.4
Total	347.6	288.5	320.8	285.2	237.8	296.0

1/ F.A.O. species group "31"

2/ F.A.O. species group "32" excluding blue whiting, Norway pout and Chilean hake.

Source: F.A.O.

TABLE 10: ATLANTIC CATCHES OF MAJOR GROUNDFISH SPECIES BY PORTUGAL, 1974-78

'000 tonnes, live wt.

Species	1974	1975	1976	1977	1978	Average 1974-78
American plaice	-	1.6	0.6	0.5	-	0.5
Common sole	0.6	0.8	1.1	1.0	0.6	0.8
Other flatfish[1/]	1.7	1.8	2.7	1.1	1.0	1.7
Atlantic cod	159.1	94.9	71.2	32.2	19.7	75.4
Hakes	29.3	28.7	34.6	24.1	21.3	27.6
Pouting	4.0	4.4	3.7	3.8	3.3	3.8
Saithe	0.2	6.4	7.3	0.8	0.2	3.0
Whiting	-	-	0.8	1.7	2.6	1.0
Other roundfish[2/]	-	-	0.3	+	0.3	0.1
Atlantic redfish	7.2	8.0	6.8	3.5	1.5	5.4
Total	202.1	146.6	129.1	68.7	50.5	119.4

1/ F.A.O. species group "31"
2/ F.A.O. species group "32" (excluding blue whiting)

Source: F.A.O.

TABLE 11: ATLANTIC CATCHES OF MAJOR GROUNDFISH SPECIES BY SPAIN, 1974-78

'000 tonnes, live wt.

Species	1974	1975	1976	1977	1978	Average 1974-78
European flounder	-	1.3	1.3	2.4	3.3	1.7
Common sole	3.9	4.2	2.5	3.0	3.5	3.4
Megrim	13.6	14.7	15.4	12.6	13.8	14.0
Other flatfish[1/]	0.1	0.1	0.1	0.6	3.4	0.9
Atlantic cod	168.1	107.1	60.6	80.4	74.6	98.2
Haddock	11.3	3.4	5.0	0.8	0.6	4.2
Hakes	218.6	258.0	270.8	291.9	227.3	253.3
Lings	4.7	5.7	4.2	2.9	4.0	4.3
Pouting	10.3	9.7	9.7	7.9	8.5	9.2
Saithe	12.7	15.6	23.1	25.2	3.0	15.9
Whiting	3.3	5.5	3.8	3.6	2.0	3.6
Other roundfish[2/]	1.1	1.4	1.3	0.9	1.4	1.2
Atlantic redfish	-	1.3	3.4	0.3	0.1	1.0
Total	447.7	428.0	401.2	432.5	345.5	410.9

1/ F.A.O. species group "31"
2/ F.A.O. species group "32" (excluding blue whiting)

Source: F.A.O.

TABLE 12: ATLANTIC CATCHES OF MAJOR GROUNDFISH SPECIES BY THE UNITED KINGDOM, 1974-78

'000 tonnes, live wt.

Species	1974	1975	1976	1977	1978	Average 1974-78
European plaice	32.7	31.4	35.8	40.2	35.7	35.2
Greenland halibut	4.8	2.1	2.6	1.2	0.5	2.2
Lemon sole	4.5	4.8	4.9	5.4	5.4	5.0
Other flatfish[1/]	8.5	7.3	7.2	7.5	8.1	7.7
Atlantic cod	321.3	290.9	254.5	177.2	151.4	239.1
Haddock	145.5	129.5	146.1	140.5	94.1	131.1
Hakes	2.6	2.8	2.1	1.9	2.0	2.3
Lings	4.3	3.7	4.0	5.1	4.6	4.3
Saithe	51.8	41.2	47.3	41.3	36.4	43.6
Whiting	45.2	51.7	55.2	55.9	64.8	54.6
Other roundfish[2/]	2.8	2.6	2.5	2.8	2.9	2.7
Redfish	11.3	6.0	6.5	7.6	3.5	6.9
Total	635.3	574.0	568.7	486.6	409.4	534.8

[1/] F.A.O. species group "31"

[2/] F.A.O. species group "32" (excluding blue whiting and Norway pout)

Source: F.A.O.

TABLE 13 : ATLANTIC CATCHES OF MAJOR GROUNDFISH SPECIES BY PRINCIPAL NET EXPORTERS IN EUROPE* (DENMARK, FAROES, GREENLAND, ICELAND, NETHERLANDS AND NORWAY)

'000 tonnes, live wt.

Species	1974	1975	1976	1977	1978	Average 1974-78
Common dab	8.6	8.4	7.2	8.0	7.9	8.0
Common sole	16.8	16.7	12.7	12.4	8.2	13.4
European flounder	9.8	7.7	6.1	5.5	6.7	7.2
European plaice	97.6	97.4	104.9	109.1	90.0	99.8
Greenland halibut	15.8	10.6	12.6	23.0	22.6	16.9
Other flatfish 1/	10.0	11.4	12.3	12.3	12.2	11.6
Atlantic and Greenland cod	816.6	850.7	955.1	1034.1	1001.1	931.5
Haddock	169.8	149.9	157.8	129.2	118.0	144.9
Hakes	2.8	2.9	2.6	2.1	2.3	2.5
Lings	36.9	32.8	37.2	34.3	37.6	35.8
Saithe	294.6	249.4	290.7	236.0	224.4	259.0
Tusk	40.3	27.5	35.1	32.3	29.5	32.9
Whiting	154.5	99.0	153.5	76.0	77.3	112.1
Other roundfish 2/	3.8	2.5	2.4	2.4	6.6	3.5
Atlantic redfish	47.5	45.3	52.3	38.4	45.3	45.8
Total	1725.4	1612.2	1842.5	1755.1	1689.7	1725.0

* Greenland has been included because of its ties with Denmark and the E.E.C.

1/ F.A.O. species group "31"

2/ F.A.O. species group "32" (excluding blue whiting and Norway pout)

Source: F.A.O.

TABLE 14 : ATLANTIC CATCHES OF MAJOR GROUNDFISH SPECIES BY PRINCIPAL EASTERN BLOC PRODUCERS (U.S.S.R., EAST GERMANY AND POLAND), 1974-78

'000 tonnes,live wt.

Species	1974	1975	1976	1977	1978	Average 1974-78
American plaice	28.2	21.9	13.8	4.4	2.0	14.1
European flounder	7.4	7.2	7.0	8.1	2.7	6.5
Greenland halibut	86.7	92.4	71.5	40.6	32.3	64.7
Witch flounder	20.4	20.5	13.4	6.6	7.3	13.6
Yellowtail flounder	7.4	4.6	0.3	0.1	-	2.5
Other flatfish1/	26.7	20.5	18.0	22.1	20.0*	21.5
Atlantic cod	863.7	675.7	598.3	504.0	402.3	608.8
Haddock	179.6	171.7	129.7	60.9	46.6	117.7
Hakes	654.3	530.3	578.8	403.7	291.9	491.8
Polar cod	125.1	63.1	12.2	8.0	5.1	42.7
Redfish	182.4	359.8	452.5	198.3	121.7	262.9
Roundnose grenadier	59.1	63.1	34.0	28.3	133.0	63.5
Saithe	198.5	201.4	151.0	69.7	25.6	129.2
Wachna cod	33.3	33.2	27.5	41.0	41.3	35.3
Whiting	4.0	6.1	6.2	2.9	0.6	4.0
Other roundfish	1.3	0.8	0.7	0.1	0.1*	0.6
Total	2478.1	2272.3	2114.9	1398.8	1132.5	1879.4

1/ F.A.O. species group "31"
2/ F.A.O. species group "32" (excluding blue whiting and Norway pout)
* Estimated

Source: F.A.O.

APPENDIX A

COMMON AND SCIENTIFIC NAMES OF MAJOR GROUNDFISH SPECIES

Common Name	Scientific Name
American plaice	*Hippoglossoides platessoides*
Atlantic cod	*Gadus morhua*
Atlantic redfish	*Sebastes marinus*, *S. mentella*
Common dab	*Limanda limanda*
Common sole	*Solea solea*
European flounder	*Platichthys flesus*
European plaice	*Pleuronectes platessa*
Greenland cod	*Gadus ogac*
Greenland (turbot) halibut	*Reinhardtius hippoglossoides*
Grenadiers	*Macrourus rupestris*, *Macrourus* spp.
Haddock	*Melanogrammus aeglefinus*
Hakes	*Urophycis chuss*, *U. tenuis* *Merluccius balinearis*, *M. cadenati*, *M. capensis*, *M. hubbsi*, *M. merluccius*, *M. paradox*, *M. polli*, *M. senegalensis*
Lemon sole	*Microstomus kitt*
Lings	*Molva dypterygia*, *M. molva*
Megrim	*Lepidorhombus whiffiagonis*
Polar cod	*Boreagadus saida*
Pollack	*Pollachius pollachius*
Pouting	*Trisopterus* (*Gadus*) *luscus*
Saithe (pollock)	*Pollachius virens*
Wachna cod	*Eleginus navaga*
Whiting	*Merlangius merlangus*
Winter flounder	*Pseudopleuronectes americanus*
Witch flounder	*Glyptocephalus cynoglossus*
Yellowtail flounder	*Limanda ferruginea*

Source: F.A.O.

Section 3

A. Principal Target Markets

B. Lesser Markets

Section three examines the market for groundfish in some detail in the U.K., France and Germany. Further country profiles look at Spain, Portugal, Italy, Belgium and the Netherlands.

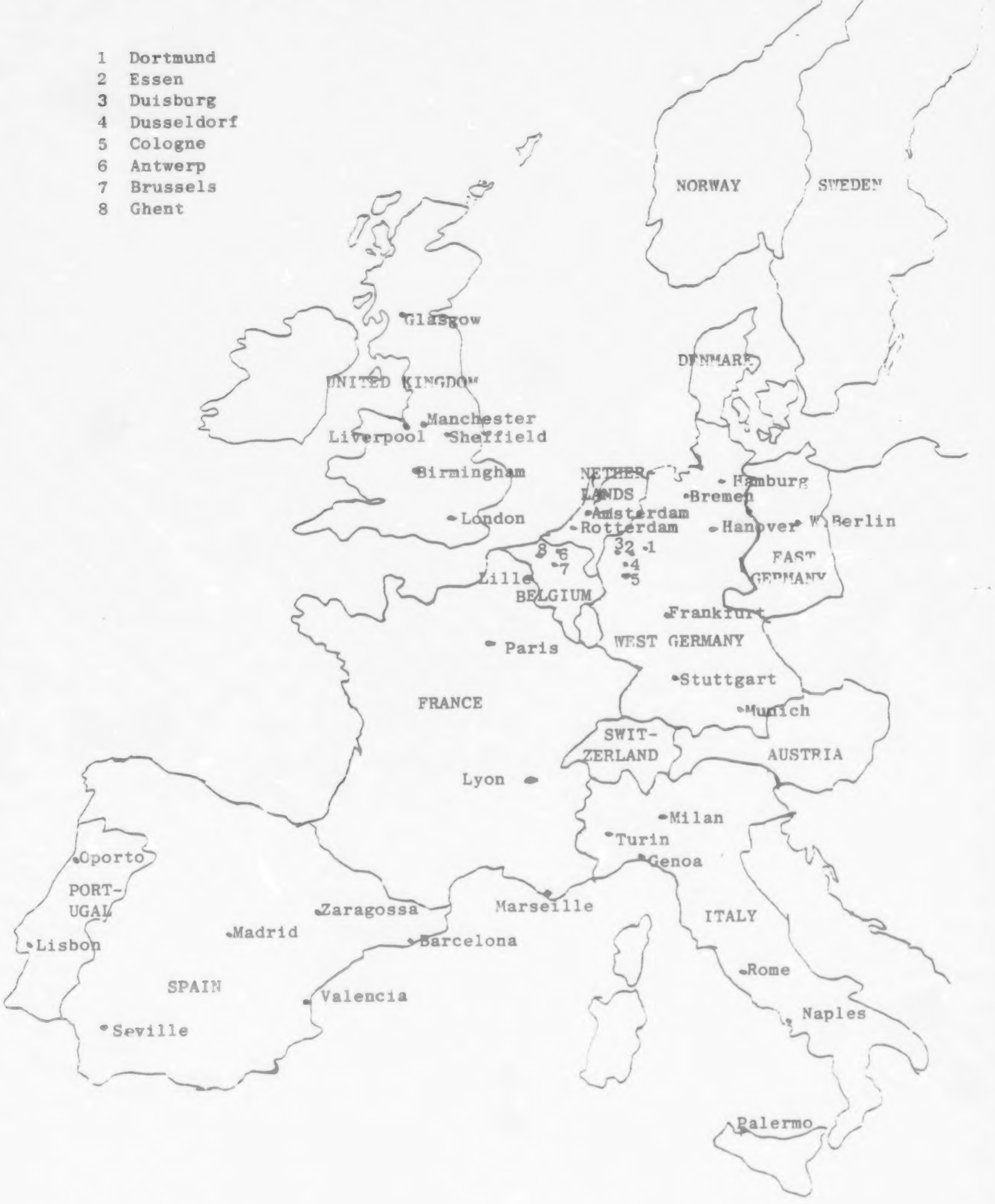
In each profile the approach is standardised with sections on production, imports, distribution, consumption,prices and lists of importers.

For each country there exists a variety of data which are more or less up to date and cover the subjects in greater or lesser detail. In preparing their reports the consultants have used the most recently available data, including in some cases data for 1979 which is just becoming available. Rather than adopt a lowest common denominator approach relevant data have been included on individual countries even where strictly comparable data does not exist for other countries which have been profiled.

Figure 1 shows the main population centres in the target markets, capital cities and towns with a population greater than half a million.

Appendix A which follows Section 3 shows the exchange rates for all west European countries. Appendix B gives the weights used in the text.

FIGURE 1: WESTERN EUROPE. MAIN POPULATION CENTRES IN TARGET MARKETS



The French Market for Groundfish

INTRODUCTION

France, which has a surface area some two and a half times that of the United Kingdom has a slightly smaller population estimated at 53.3 million in 1979. By far the largest centre of population is Paris with 9.3 million inhabitants. The three next largest cities are Lyon with 1.3 million inhabitants, Lille and Marseille, each with a little over a million inhabitants. Over the period to 1985, France's population is expected to grow only slightly.

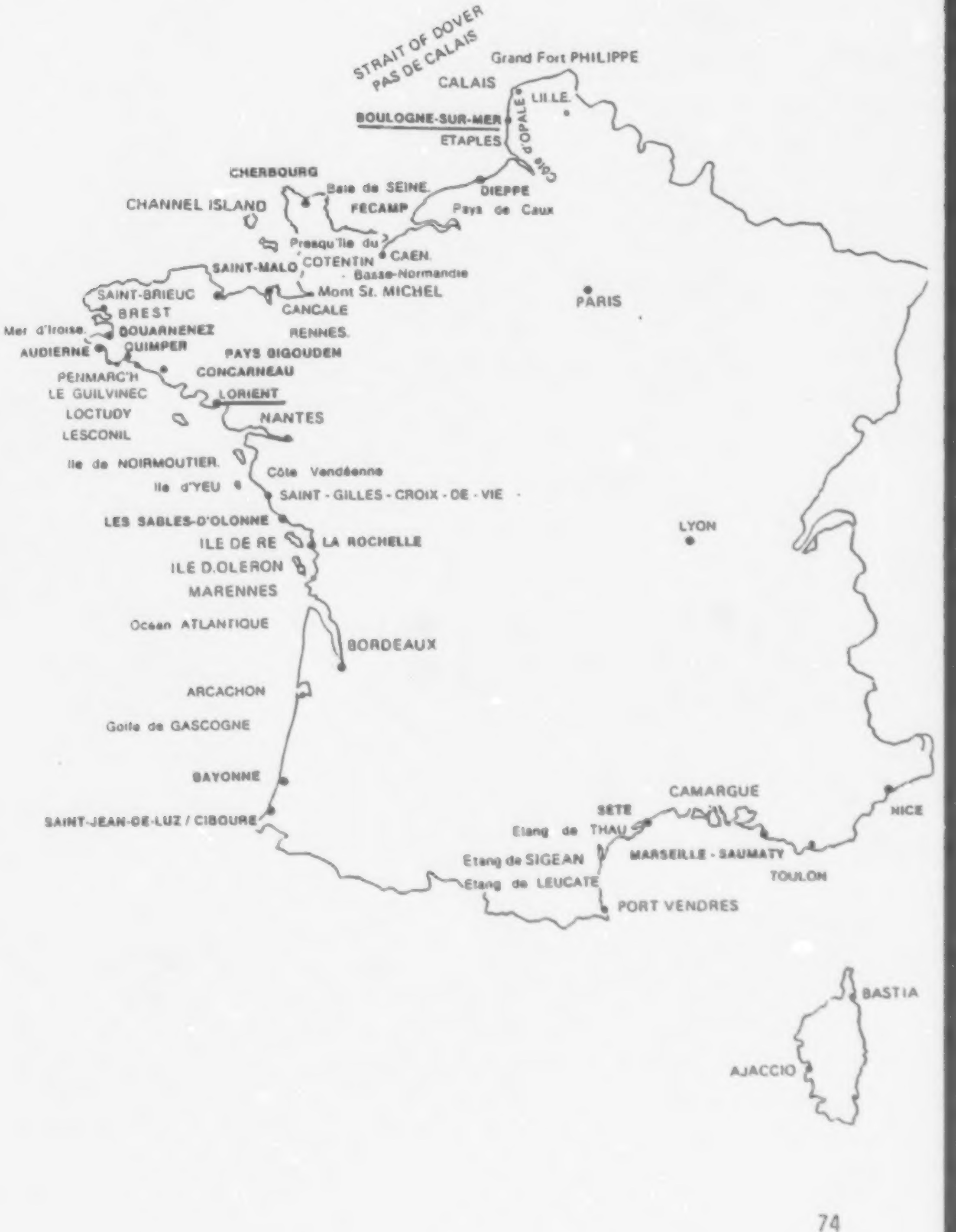
France has a long tradition of fishing, not only in her own inshore waters but also around Britain and Ireland and in distant water fisheries, particularly in the North West Atlantic. Her principal ports are Boulogne and Lorient. Fecamp is the centre of the salt cod trade.

Limitation of access to resources and the institution of quota arrangements have placed severe strains on the industry. Landings at the major ports for January to September 1979 were four per cent down on the corresponding period in 1978. In response to declining opportunities in traditional fisheries a feature of the modern French industry has been the development of the distant water tuna fleet, which now operates in the waters of over twenty African states.

There are some 13,000 French fishing vessels, 97 per cent of which are in the smaller "artisanal" sector. In 1978, France had 400 vessels of more than 100 g.r.t. compared with 354 vessels in this category in the U.K. for instance. Although the artisanal sector is characterised by a high average vessel age and old equipment, increases in Government assistance led to the ordering or construction of 155 new vessels in 1978.

The /

French Fishing Ports



The French fishing fleet currently employs about 28,000 fishermen. As in the other EC countries direct fisheries employment is relatively small on the national scale but is particularly important in such regions as Brittany where 50,000 persons are connected with the industry. The accompanying map shows the French fishing ports.

Production is organised by producers organisations of which there are 18 in France: 5 for the larger vessels, the so-called "industrial" fleet, 12 for "artisanal" fishermen and one for oyster farming. The producers organisations are grouped into a national association which fixes annual withdrawal prices for species not covered by the European Community. The various sectors of the trade: trawler owners, merchants, importers, exporters, processors, retailers are all represented on the Central Committee of French Fisheries (CCPM), which reports to the Government. FIOM (the Fund for Intervening and Organising Markets), set up in 1975, gives assistance to exploring for and processing under-utilised species and, through a daily computer link with the main landing ports, promotes fish according to the abundance of landings.

Boulogne, the Principal Port and Processing Centre

It is the base of large, integrated fishing companies with interests in vessels, the import and export of fish, the fresh fish trade, fish processing and canning.

The presence of salters and smoking houses and the smell of burning woodchips in the air reflect Boulogne's traditional dependence on herring, although production has sadly declined in recent years and there has been little development of other products /

products. The fragmented nature of the herring trade prevents it from obtaining official funds for developing and promoting new smoked products.

One aspect of herring canners' search for new products and markets is the production of saithe fillets in cans.

Overall the French canning industry has been hit by declining demand and over-capacity whilst the frozen food sector is growing steadily. Therefore, this is the sector of the French food industry where there has been most restructuring in recent years.

In September 1979, the Imperial Foods subsidiary Ross Foods UK, which claims to be the principal supplier of frozen food to the catering industry in the U.K. formed a new company with Saupiquet which claims to be the largest food canner in France. Ross's aim is to expand in France with the collaboration of a French company rather than set up a separate subsidiary.[1/] The link-up may also reflect an estimation of low growth potential in the U.K.[2/]

In addition to local landings Boulogne handles a substantial quantity of French fish imports as well as overland fish. In total, some 250,000 tonnes of fish pass through the town each year. Because of the town's proximity to the Belgian border Boulogne also serves as a centre for export and re-export to Belgium and /

1/ Financial Times 12/9/1979

2/ Eurofood 13/9/1979

and Germany. Boulogne also has a rail terminal managed by STEF, a subsidiary of the French national railway for handling fish.

Transport regulations, particularly differences between France and the U.K. over permitted axle loads create difficulties in transporting a product like fish between France and the U.K. where any delay can increase spoilage. However, quota regulations for the use of U.K. vehicles in France have recently been relaxed.[1/] Difficulties also exist in transporting fish from France to Italy.

Recently there has been a substantial increase in cold-store capacity at the port. A feature of interest to exporters is the 20,000 cu. metre cold store operated by Christian Salvesen near Boulogne. Plans are afoot to increase the store's capacity and develop a continental distribution network. The plant also offers a repacking facility.

The tables and commentary given below illustrate the main features of the French market for groundfish.

PRODUCTION

French landings have remained rather static in recent years with both demersal and pelagic landings declining somewhat since 1974. The principal demersal species landed in France is saithe. This is followed by whiting and cod. Tuna is by far the most important pelagic species followed by mackerel and sardine. The scientific recommendations for future allowable catches give little room for improvement, particularly for the important saithe and whiting categories.

Table /

[1/] The question of ease of transport should be borne in mind when considering the setting up of distribution networks for Newfoundland products.

Table 1 shows landings and values of the main demersal species from 1975 to 1978. After saithe, cod and whiting, shown in the table, the next most important species was hake. Some 12,000 tonnes of sea bream, dogfish and monkfish were landed in 1978 and 9,500 tonnes of haddock. Sole and megrim landings together accounted for some 10,000 tonnes and redfish landings were just over 4,000 tonnes, a twenty-five per cent decline on the previous year. Thus, of the main species offered by Newfoundland, cod is the major preference in France.

As a part of cod landings are either filleted at sea or salted, it is useful to look at French landings in round weight equivalent terms. Over the period 1974 to 1978 France somewhat increased her landings of fresh cod, frozen fillets declined by 34 per cent and the once famous "grande pêche" declined by more than half over the period. In the same period there has been a sharp decline in haddock landings and in 1978, saithe landings were 16 per cent less than in 1977. However, whiting landings have remained remarkably stable.

Table 2 shows landings and values at Boulogne over the period 1974 to 1978. Total landings declined from 124,000 tonnes in 1974 to 113,000 tonnes in 1978, most of the decline coming from the loss of herring catches. Cod landings at the port increased from 6,300 tonnes in 1974 to 10,700 tonnes in 1978.

Table 3 shows landings and values in recent years at the main Brittany port of Lorient. As at Boulogne, saithe is the principal demersal species landed followed by ling and whiting. Although the volume of landings is consistently lower than at Boulogne, the value of landings is only slightly less, reflecting the high value of the wide variety of high-quality demersal species landed at the port.

The /

The port of Lorient is managed by the Morbihan Chamber of Commerce. Lorient is, too, the home of the ENCPM, the National College for the Commercialisation of Sea Products. The college plays an important part in maintaining enterprise in the fisheries sector in Brittany for the school provides an overall training in fisheries management combined with a practical knowledge of fish processing. The skills acquired are particularly useful in the management of small firms where division of management functions is not possible.

Figure 1 shows the quantities of fish and shellfish passing through the new Paris wholesale market at Rungis, the market which has replaced the crowded Les Halles site in the centre of Paris.

Rungis market was opened in 1969. The fish hall is some 270 m. by 75 m. with a trading area of 9,800 sq.m. There are also cold storage and ice making facilities. The market which, in the main, serves Paris and a regional market within a 200 km. radius has recently seen an increase in German, Belgian, Swiss and Luxembourg buyers. About one-third of arrivals at the market are now imports, indicating the importance of this market for exporters.

There is a small trade in fresh water fish of about 250 tonnes per month. Marine fish arrivals at the market fluctuate around the 6,000 tonne mark per month. Shellfish arrivals are greatly influenced by the market for oysters which peaks very sharply over the Christmas period and then falls away to nothing in the summer months. Virtually all the fresh fish coming into the market appears well iced in expanded polystyrene containers - particularly noticeable is the high quality Danish cod.

Imports /

IMPORTS

In spite of her long maritime history, France is a major net importer of fish. Taking the French fish market as a whole, with declining landings and no increase in cultured shellfish production, and increased consumption of fish and fishery products has had to be met by greater imports. In 1978, imports amounted to 3.8 thousand million francs and exports to only 0.96 thousand million francs.1/ Indeed, in 1978, for the first time imports exceeded the value of home production.

The principal species imported into France included salmon, cod, shrimps and prawns, tunas, sardines, soles and crabs. Although Newfoundland groundfish exporters are likely to concentrate on cod for the French market, the fact that French wholesalers demand a range of fish products means that importers must offer a wide range of products if they are to survive.

The products which importers are seeking, in particular, include turbot, sole, red mullet, bass, monkfish, bream, skate wings, shark (mostly for display purposes) and all types of shellfish. Interestingly, importers are now beginning to buy monk tails, dogfish and skate from Canada but, it is suggested, that the quality of these products is not yet as high as from some other exporting countries.

A quite different opportunity may lie in the French petfood market which is growing at 20 per cent per annum. France is now the third largest petfood market in Europe. Whereas only 30 per cent of dog and cat owners gave their pets commercial petfoods in /

1/ There were approximately three and a half francs to the Canadian dollar at the beginning of March 1980.

in 1975, this had increased to 40 per cent by 1977.[1]

The principal countries exporting all types of fish to France in 1978 were:-

	Volume (tonnes)	Value ('000 francs)
Canada	18,226	270,146
Denmark	33,979	287,835
Netherlands	51,609	334,744
Senegal	235,528	285,401
United Kingdom	47,502	312,910

The main import from Canada was salmon whilst it was mostly tuna which came from Senegal. Although the U.K. is a substantial importer of fish she has a large export trade to France. The figures, therefore, show France's strong trading links with her closest neighbours, a very significant trade with Canada's competitor Denmark and a high volume trade with West Africa, the francophone area which will wish to increase its white fish outlets in the EC.[2] The high Canadian figures show the strong trade links which have been built up in fish and fish products and can be further developed.

Table 4 provides some historical data on French imports and exports by product type over the period 1975 to 1977. Whilst there has been some increase in exports the rise in the value and volume of imports is very noticeable. The greater part of French imports are in fresh or frozen form. Not surprisingly with the decline of the "grande peche" there was an increase in dried or salted products but the increase was not very substantial in weight terms.

Tables 5 and 6 set French trade in fishery products in its overall context, providing greater detail of the trade for the years 1977 and 1978. Of the major import categories, the largest increases /

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[1] Eurofood 1/2/1979

[2] In return for fishing rights in West African waters the countries involved are demanding funds from the European Community for the development of their own industries.

increases in 1978 over 1977 were for sardines, cod and sole in the whole form, although sole imports amounted to only 7,000 tonnes. The main increases in the dried salted and smoked form were for cod and herring. France's strong demand for shellfish is seen in the increases in nearly all shellfish imports with notable increases in crab, lobster, crayfish and cephalapods. Again these are areas beyond the remit of this study which require more detailed examination.

Turning specifically to cod, figures just released covering the four years up to 1979 are shown in Table 7. In each year the major import category was fresh or chilled fish, although there has been no growth in this category. There was, however, a 41 per cent increase in frozen fillet imports in 1979, whereas dried and salted imports were down on 1978. France imports very little whole frozen cod.

Table 8 shows imports of cod by main country of origin. It is significant that in the quality fresh and chilled category, Denmark increased her exports to France whilst the average value of exports fell by one per cent. Over 80 per cent of the increased frozen fillet imports were from Germany. Norway was the major source of dried cod, again there was little increase in average value. Most of the fall in salt cod imports was reflected in the decline of Faroes exports.

An important factor affecting the extent of import penetration by a particular country is quality. When discussing quality, importers remark on the fine appearance of Danish products, particularly cod. As indicated, the high quality of the large headless fresh cod seen at Rungis market during the preparation of this study certainly bears out the assertion.

The Common Customs Tariff of the EC applies on imports to France. Importers will generally quote prices in an acceptable currency CIF France. They will also quote initially in pounds or kilos according to exporters' preference. Again, this reflects the strong demand for certain products. No doubt, those who provide good quality and can quote in metric weight and French currency will be better placed to retain their position when markets weaken. Such a policy is also necessary for documentation. Bills of lading and commercial invoices are the only general shipping documents normally required by French customs officials. Bill of lading values may be stated in whatever currency the transaction takes place. Weights should be stated in metric units. Imports require to have a health certificate. Fish may be inspected at the point of entry to ensure its wholesomeness. Two small fees are payable by the importer in connection with the inspection.

Examining products on the French market it is clear that most exporters label their products clearly for this market. In line with the harmonisation of EC regulations France now requires imports to display the name of the products on the outer carton, also the net weight, the date of freezing (where appropriate) and the estimated shelf life of the product.

DISTRIBUTION

The French fish distribution system developed on the basis of fresh fish landed daily at the ports from which it is distributed by merchants to retailers and inland wholesalers, the most important being the Rungis market near Paris. Imported fish entering the country mainly through Boulogne and Rungis is distributed to wholesalers who supply institutional and catering outlets and retail shops.

Although /

Although fresh fish still predominates in the French market the increasing dependence on imports has accelerated the rise in the consumption of frozen fish.

Changes in eating and shopping habits have been rather slower to develop in France than in some other countries of Western Europe. However, the 9,000 odd retail fishmongers, who still account for some two-thirds of fish sales, are experiencing difficulty in adapting to new trends in distribution and consumption. It also appears that large shops with instore wet fish counters, particularly in Paris, find difficulty in attracting good staff. This again may encourage the production of frozen products.

The principal growth areas for fish products are freezer centres, institutional catering and large supermarkets. The growth of the latter type of outlet has also encouraged independents and co-ops to come together to form central buying organisations.[1/]

The table below shows the type of outlet frequented by the French household purchaser of fresh, smoked, salted and dried fish.

Distribution /

[1/] There is very little information available on the French catering market for fish, except for the impression that it is a growing sector. As more French businesses adopt "la semaine anglaise" i.e. a short lunch break, the requirement for canteen facilities will grow. Large landings of saithe in France are suited to the institutional market.

Detailed panel data now exist on the French household market which are in certain respects more comprehensive than the Attwood data for the U.K. as they include all types of fish purchase. Unless otherwise stated the following tables on consumption and distribution are based on data collected by SECODIP and disseminated by FIOM and the CCPM. Unfortunately there exist no earlier data from which to establish trends.

Distribution of Fresh, Smoked, Salted and Dried Fish 1978

Outlet	Product weight (tonnes)	Percentage
Hypermarkets	16,610	9
Larger Self Service	18,890	11
Small Self Service	6,220	4
Direct Sale	9,080	5
Mongers	81,820	46
Street Markets	39,120	22
Others	4,660	3
Total	176,400	100

Source: SECODIP

Although there are very many small outlets for frozen food in France, that country has played a major role in the development of freezer centres and hypermarkets, there being about 400 of both in France today. It is not surprising, therefore, that shopping trends are reflected in the purchase patterns of frozen fish as revealed in the panel information.

Place of Purchase of Household Supplies of Frozen Fish (tonnes)

Type of Outlet	Tonnage	Percentage
Hypermarket	7,600	15.5
Larger Self Service	16,300	33.5
Smaller Self Service	4,500	9
Home Service	10,600	21.5
Freezer Centres	8,100	16.5
Others	1,900	4
Total	49,000	100

Source: SECODIP

Looking in more detail at the type of frozen product by outlet we find that the qualities which the consumer looks for in the product is reflected in the place of purchase. Thus the 5 lb. type polythene pack (just over 2 kg.) in which fillets are normally /

normally purchased is favoured by freezer owners and is, therefore, more likely to be bought from a home sale or freezer centre store. Whole frozen fish are also mostly purchased from such outlets. By contrast the convenience breaded product is bought particularly in the self service store. The more expensive prepared dishes are bought mostly in hypermarkets and large self service stores where the consumer can combine lower price with one stop shopping. Specialist shops are the main outlet for shellfish.

Frozen Product Type of Outlet

	Total	Hyper- market	Self Service with trolley	Small Self Service	Home Sale	Freezer Centre	Others
Total %	100	100	100	100	100	100	100
Fillets	26.5	19	21	20	39	30	22
Breaded	41	50	56	57	20	24	28
Whole	11	5	3	5	21	22	22
Prepared Dishes	9.5	13	13	10	5	5	5
Shellfish	12	13	7	8	15	19	23

CONSUMPTION

Whilst fish consumption has tended to stagnate in the U.K. in recent years there has been an apparent increase in French consumption of some 4 per cent per year over the period 1974 to 1978.[1/]

Figures obtained from the SECODIP panel of French consumers, indicate a household market for fish of some 220,000 tonnes in product weight terms in 1978. The statistics show that 70 per cent of purchases were of fresh sea fish. 42 per cent of purchases were /

1/ F.A.O. Country profile of France.

were of whole fish, 20 per cent frozen fish, 16 per cent steaks, 12 per cent fillets, 6 per cent fresh water fish and 4 per cent dried, salted or smoked fish. Grossed up the frozen tonnage represented a household market of some 108,000 tonnes round weight and the dried, smoked or salted tonnage was about 27,500 tonnes.

Of France's 18 million households some 85 per cent bought fresh, smoked or dried fish in 1978. Fish was typically purchased by families in the higher social brackets in the older age groups, and with children.

The coastal and Paris regions are the largest consumers of fish. Buyers of fish fillets have a younger age profile than for whole fish or steaks both because of the convenience factor and because families with younger children prefer to buy fish without bones.

The principal species consumed whole in France are mackerel, whiting and sardine; the main group consumed in steaks are saithe, cod and monkfish; the principal filleted species are saithe, cod, whiting and lemon sole; the main smoked varieties are salmon and cod.

A closer examination of fillets with which the Canadian frozen product would compete shows the following species breakdown.

Percentage Breakdown of Fresh Fillet Purchases, 1978

Total	100 per cent
Saithe	11
Ling and Pollack	4
Cod	16
Whiting	45
Others	24

Whiting /

Whiting is the most important species consumed in each French region; cod and saithe are the more popular in the east.

France is one of the larger consumers of salted and dried cod. However a consumption profile of buyers shows that it is purchased more by older, more traditional housewives outside the Paris region.

Profile of Buyers of Salted and Dried Cod (Morue), 1978

	Index of Consumption	
Age	Less than 35 years	71
	35 to 49	105
	50 to 64	123
	65 and over	108
Socio-economic Group	Leisured	103
	Upper Middle	99
	Lower Middle	107
	Modest	78
Habitation	Less than 2,000 inhabitants	106
	2,000 to 49,999 inhabitants	85
	50,000 inhabitants and over	110
	Paris region	90
Number of persons per Household	Single Women	44
	2 people	102
	3 people	112
	4 people and over	120
Presence of Children	With children	99
	Without children	123

There has been a steady growth in the sale of frozen fish in France in recent years but this sector has underperformed the frozen sector in general as the figures given below suggest.

Consumption /

Consumption (thousand tonnes) of Frozen Foods

Year	Sea Products[1]	Total	Sea Products as Percentage of Total
1968	40.0	50.2	80
1971	46.1	104.4	44
1973	35.2	139.0	26
1975	45.5	209.9	22
1977	65.4	325.6	20
1978	74.9	359.2	21

Source: F.I.C.U.R.

[1] There are small sales of frozen fresh water fish in France. The figures given in this table are broadly comparable with those in the next table which come from a different source.

The apparent internal market for frozen fish is broken down as follows:-

Year	1973	1975	1977	Per Cent Increase 1977/73
Whole Fish	18,729	19,296	23,191	24
Fillets	13,396	22,371	22,628	69
Sticks and Portions	25,866	19,318	27,832	8
Prepared Dishes	2,909	5,836	6,829	135

Source: La Peche Maritime Dec. 1978
P.691

Some 63 per cent of French households purchased frozen fish in 1978, sales being strongest in east and east-central France where fresh sales are weakest. Paris and the surrounding area accounts for about half of frozen purchases. The percentage breakdown of household consumption of fishery products by category was as follows for 1978.[1]

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[1] As the panel data are prepared on a different basis from the total frozen fish figures contained in the previous table, they can not be directly compared without further analysis. Unfortunately the available frozen fish consumption data is not available on a species basis.

Breaded Products	41 per cent
Fillets	26.5
Shellfish	12
Whole Fish	11
Prepared Dishes	9.5

The table below analyses frozen fish and shellfish purchases on a regional basis.

Regional Breakdown of Frozen Fish Purchases by Product Type (1978)

	Total	North	East	Paris	West	Centre West	Centre East	South West	South East
Total %	100	100	100	100	100	100	100	100	100
Fillets	26.5	18	29	27	28	23	31	18	26
Breaded	41	52	43	40	33	46	45	39	39
Whole	11	9	10	9	16	13	7	16	13
Prepared Dishes	9.5	11	8	13	8	8	6	12	8
Shellfish	12	10	10	11	15	10	11	15	14

The East and Centre east are above average purchasers of fillets; the Centre east and Centre west are above average for breaded products whilst the Southern parts of the country are highest for whole fish. As might be expected the more sophisticated Paris region is the main purchaser of prepared dishes. Only for frozen shellfish is the fresh fish eating West an above average purchaser.

As a pointer to the future it may be noted that buyers of frozen fish are generally from the higher social groups and also generally families with children. Prepared dishes and breaded products are preferred by younger families.

The profile of the consumers of frozen prepared fish dishes shows that purchases are much greater amongst younger households. They are a decidedly up-market product and are purchased particularly in the trend setting Paris region. The convenience element /

element is shown by the appeal to larger families with children in the house who will become the purchasers of the future. Looking into the future, therefore, one can envisage a long term marketing plan targetting this type of market segment.

Profile of Buyers of Frozen Prepared Fish Dishes

	Index of Consumption	
Housewife's age	Under 35	140
	35 to 49	128
	50 to 64	81
	65 and over	37
Socio-economic Group	Leisured	147
	Upper Middle	141
	Lower Middle	80
	Modest	24
Habitation	Less than 2,000 inhabitants	58
	2,000 to 49,999	102
	50,000 inhabitants and over	102
	Paris region	151
Number of Persons per Household	Single Women	29
	2 people	72
	3 people	121
	4 people and over	150
Presence of Children	With Children	145
	Without Children	86

Packaging

The principal brands of processed fish on display in the supermarkets are Iglo, Findus and Vivagel. The most common weight of pack is of 400 grammes, the typical pack being a coloured waxed cardboard carton. The fact that three-quarters of French dwellings are flats limits storage space and, therefore, the demand for large packs. There is some repacking of IQF fillets into 1 and 2 kg. packs mostly for the freezer centre market. The fish is packed into hermetically sealed cartons with celophane windows. Such packing is necessary to stop the French housewife breaking the pack open and inspecting individual fillets.

There is little evidence of the British type fish finger on display in French stores, the French preferring 50 gramme breaded portions packed 8, 10 or 20 to the pack. Fish portions have a high fish content stated at 72 per cent on the pack. French packs all list the quantity and type of fish in prepared dishes. All packs have cooking instructions and warn against refreezing.

The range of breaded and portioned products on display is limited but within the prepared dish range there are a number of interesting regional dishes such as "poisson au four a la Bordelaise" and Findus market a range of gourmet products including a fish dish "filet de merlan a la julienne de legumes".

Freezer centre packs are mostly polythene bags containing just over 2 kilos. Packs state net weight, date of freezing and country of origin and also give recommended storage times. Products seen during a visit to one Paris freezer centre included whole bream, sole and red mullet, monk tails from the U.S.A., skate wings from South Africa and Argentinian hake in various forms.

PRICES

Price data are shown in a number of tables.

The figures given in Table 5 show that compared with 1977 the average value of French fresh, chilled or frozen white fish imports rose by only 3.3 per cent. Fillet imports rose by 18 per cent and dried, salted or smoked imports by 4.9 per cent. However, the average value of dried and salted cod only rose by 1.3 per cent. The continued price stagnation for these cod products is also seen in Table 8.

Table /

Table 9 shows average values of selected species landed by French vessels against which Newfoundland exporters can compare their prices.

Figure 2 compares the wholesale and retail price of cod in France.

Major French retailers, who are increasingly looking for direct purchases expect 90 day's credit. This has to be costed into the selling price. Suppliers considering the Paris wholesale market should check their prospective buyer's credit position carefully and remember the adage that you can sell anything at Rungis but payment is sometimes difficult to obtain.

CONCLUSION

The above tables show that in the face of at best stagnating home production and rising fish consumption France has had to turn increasingly to fish imports. France is not a large consumer of redfish nor of flounder type species. Although cod imports were greater in 1978 and 1979 than in earlier years, particularly for fillets, Canada faces competition from the easy access which Denmark has for fresh imports to the Paris wholesale market.

Looking to 1985 and beyond the growth of direct buying by large stores suggests further possibilities for the supply of high grade processed products to the mass market.

FRANCE

TABLE 1 : LANDINGS AND VALUES OF SELECTED SPECIES

		1975			1976			1977			1978		
		Q1	V	Q2	Q1	V	Q2	Q1	V	Q2	Q1	V	Q2
COD	- Fresh	17.4	61.9	21.5	17.4	71.8	21.5	17.7	85.5	21.9	22.6	120.2	28.0
	- Frozen Fillets	17.1	81.6	48.1	14.6	98.8	41.0	14.3	131.2	40.3	11.2	113.3	31.5
	- Salted	4.0	22.7	11.0	2.7	17.7	9.3	2.0	16.5	7.1	1.5	11.4	5.3
	- Total	38.5	166.2	80.6	34.7	188.3	71.8	34.0	233.2	69.3	35.3	244.9	64.8
SAITHE	- Fresh	53.8	N.A.	66.7	63.0	N.A.	78.1	64.1	N.A.	79.5	54.2	N.A.	67.2
	- Frozen Fillets	1.1	N.A.	2.5	1.8	N.A.	5.5	2.0	N.A.	6.3	1.6	N.A.	5.1
	- Total	54.9	101.9	69.2	64.8	137.8	83.6	66.1	184.8	85.8	55.8	189.5	72.3
WHITING		36.3	84.9	43.9	36.8	102.2	44.6	34.0	117.2	41.1	36.8	123.1	44.5
HAKE		20.6	162.1	24.2	17.2	179.4	20.1	17.0	190.5	19.9	17.4	210.3	20.3
HADDOCK	- Fresh	13.1	N.A.	15.3	13.0	N.A.	15.6	11.7	N.A.	14.1	9.1	N.A.	10.9
	- Frozen Fillets	1.5	N.A.	3.9	1.5	N.A.	4.6	0.4	N.A.	1.2	0.4	N.A.	1.1
	- Total	14.6	35.2	19.2	14.5	43.7	20.2	12.1	40.3	15.3	9.5	33.3	12.0

Source: Comité Centrale des Pêches Maritimes

Q1 = Landed weight, '000 tonnes
V = Million francs
Q2 = Round weight equivalent, '000 tonnes
N.A.= Not Available.

TABLE 2:

BOULOGNE: LANDINGS AND VALUES, 1974-1978

Species	1974		1975		1976		1977		1978	
	'000 tonnes	'000 000 F	'000 tonnes	'000 000 F	'000 tonnes	'000 000 F	'000 tonnes	'000 000 F	'000 tonnes	'000 000 F
Demersal										
Cod	6.3	28.0	7.7	28.8	6.3	29.0	7.5	35.7	10.7	57.4
Haddock	4.6	10.1	5.7	9.6	6.7	14.4	6.1	17.1	4.2	12.7
Saithe	31.4	73.3	31.8	59.3	35.5	77.7	36.6	99.8	30.7	103.5
Whiting	19.7	41.6	20.0	44.0	19.8	51.6	16.9	55.1	20.0	59.1
Others	15.7	39.8	14.6	37.3	18.0	49.5	18.5	64.4	16.1	63.3
Total Demersal	77.7	192.8	79.8	179.0	86.3	222.2	85.6	272.1	81.7	296.0
Pelagic										
Herring	17.7	25.7	18.6	22.9	14.8	24.7	1.7	6.6	2.9	11.4
Mackerel	21.5	22.0	14.1	14.3	18.5	17.7	18.3	21.3	24.9	29.5
Others	3.5	3.2	1.8	1.4	0.6	0.5	2.4	3.0	2.5	4.1
Total Pelagic	42.7	50.9	34.5	38.6	33.9	42.9	22.4	30.9	30.3	45.0
Others	3.5	8.9	5.9	16.9	4.5	18.7	1.6	10.5	0.8	5.8
TOTAL	123.9	252.6	120.2	234.5	124.7	283.8	109.6	313.5	112.8	346.8

Source: CCPM

TABLE 3:

LORIENT - LANDINGS AND VALUES, 1974-1978

Species	1974		1975		1976		1977		1978	
	'000 tonnes	'000 000 F	'000 tonnes	'000 000 F	'000 tonnes	'000 000 F	'000 tonnes	'000 000 F	'000 tonnes	'000 000 F
Demersal										
Saithe	23.6	46.9	18.7	31.7	22.6	40.9	23.0	59.6	18.3	61.2
Ling	10.3	25.0	6.2	12.0	9.3	20.4	9.7	31.4	7.2	27.9
Whiting	5.4	12.7	5.2	12.3	6.1	16.9	6.3	21.2	6.2	23.0
Others	29.9	122.0	29.3	128.4	30.8	157.1	27.8	162.8	27.1	167.4
Total Demersal	69.2	206.6	59.4	184.4	68.8	235.3	66.8	275.0	58.8	279.5
Total Pelagic	3.4	7.1	2.8	6.2	1.6	2.1	2.1	3.0	3.4	10.8
Total Shellfish	4.5	22.0	3.9	24.1	3.3	26.7	3.2	29.7	2.4	28.5
Others	0.4	-	2.0	0.2	1.1	3.6	1.6	5.6	-	-
Total	77.5	235.7	68.1	214.9	74.8	267.7	73.7	313.3	64.6	318.8

Source: CCPM

FIGURE

ARRIVALS AT RUNGIS

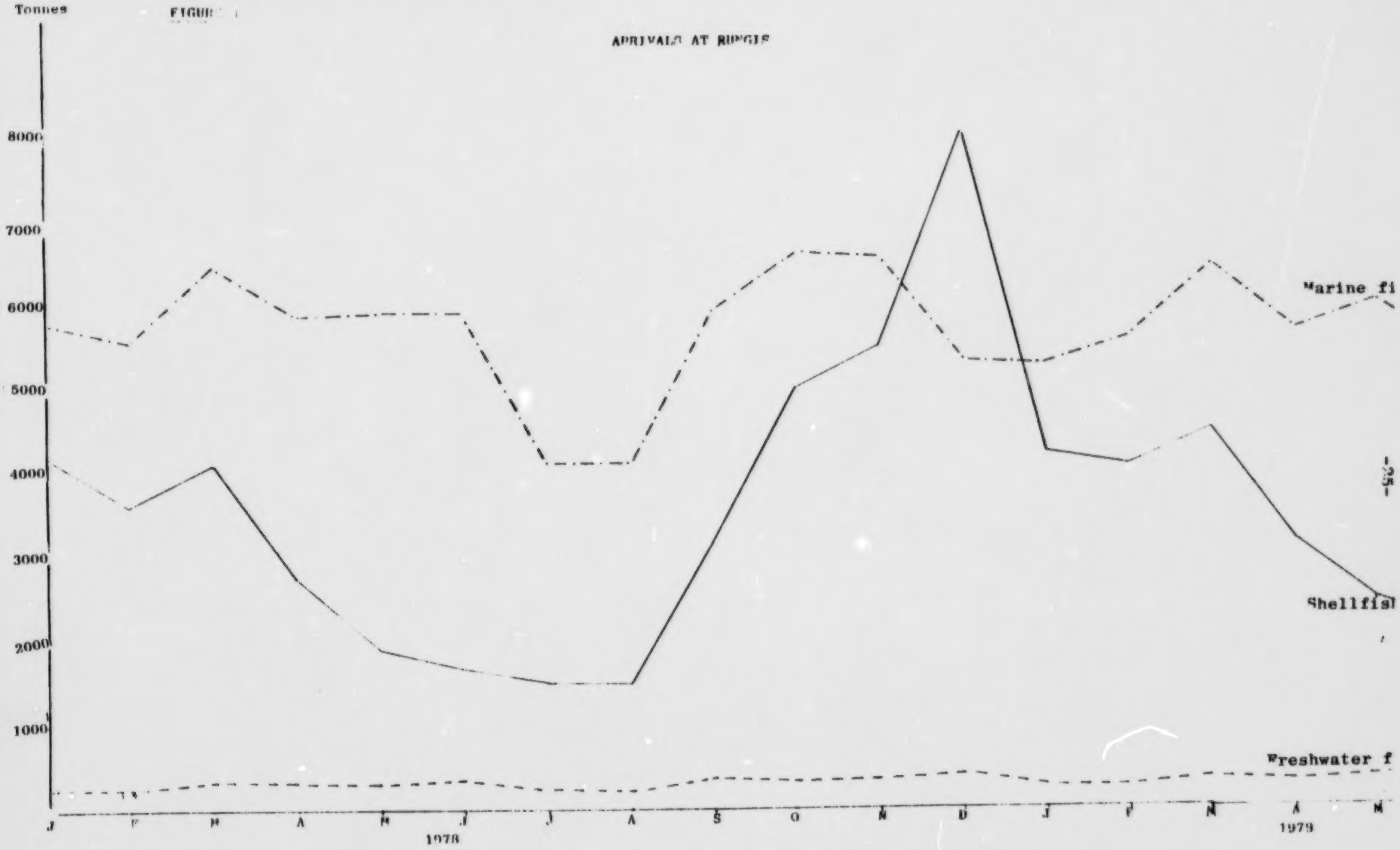


TABLE 4:

FRANCE: IMPORTS-EXPORTS, 1975-1977

	IMPORTS						EXPORTS					
	1975		1976		1977		1975		1976		1977	
	'000 tonnes	'000 000 F	'000 tonnes	'000 000 F	'000 tonnes	'000 000 F	'000 tonnes	'000 000 F	'000 tonnes	'000 000 F	'000 tonnes	'000 000 F
Fresh or Frozen	241.7	1377.7	241.0	1711.9	287.9	2184.5	60.8	321.9	95.5	480.6	87.3	578.3
Dried or Salted	11.4	56.6	14.5	96.2	16.9	128.5	3.8	27.8	3.3	25.1	2.8	25.7
Smoked	0.6	10.7	0.6	14.5	1.0	34.7	0.4	10.9	0.4	14.7	0.6	22.8
Prepared & Preserved	54.6	501.3	61.6	612.7	66.3	788.2	5.3	83.1	6.0	91.7	6.4	111.4
Total	308.3	1946.3	317.7	2435.3	372.1	3125.9	70.3	443.7	105.2	612.1	97.1	738.2
Fish Meal	57.1	73.9	59.4	98.6	59.9	141.0	10.3	14.2	14.6	24.6	18.2	44.7
Fish Oil	30.0	52.3	16.5	29.0	17.9	43.2	6.6	13.7	8.0	15.1	5.8	14.2
Total	395.4	2072.5	393.6	2562.9	449.9	3310.1	87.2	471.6	127.8	651.8	121.1	797.1

Source: C.C.P.M. Rapport sur le Commerce Extérieur des Produits de la Péche.

FRANCE

TABLE 5 : IMPORTS OF FISHERY PRODUCTS FOR HUMAN CONSUMPTION BY MAJOR VARIETY

Variety	JANUARY-DECEMBER						% change	
	1977			1978				
	tonnes	000 F	000 F/t	tonnes	000 F	000 F/t	weight	av. value
Fresh,Chilled or Frozen(ex. Fillets								
Salmon	12,065	314,528	26.07	13,202	353,481	26.77	+ 9.4	+ 2.7
Herring	13,981	54,563	3.90	12,780	66,727	5.22	- 8.6	+33.8
Mackerel	21,123	24,946	1.18	22,645	27,406	1.21	+ 7.2	+ 2.5
Tuna	13,214	76,621	5.80	12,434	75,415	6.07	- 5.9	+ 4.7
Sardines	35,911	66,636	1.86	40,572	85,182	2.10	+13.0	+12.9
Shark	5,453	35,158	6.45	5,656	41,420	7.32	+ 3.7	+13.5
Cod	21,880	122,397	5.59	24,866	135,067	5.43	+13.7	- 2.9
Whiting	2,111	7,443	3.53	1,972	7,884	4.00	- 6.6	+13.3
Sole	6,331	130,829	20.66	7,005	145,654	20.79	+10.7	+ 0.6
Other	36,324	301,070	8.29	38,709	313,849	8.11	+ 6.6	- 2.2
Total	168,393	1,134,191	6.74	179,841	1,252,085	6.96	+ 6.8	+ 3.3
Fresh,Chilled or Frozen Fillets								
Cod	10,424	102,837	9.87	10,697	110,272	10.31	+ 2.6	+ 4.5
Saithe	3,004	18,615	6.20	2,900	22,320	7.70	- 3.5	+24.2
Other	21,395	156,452	7.31	18,300	167,965	9.18	-14.5	+25.6
Total	34,823	277,904	7.98	31,897	300,557	9.42	- 8.4	+18.0
Dried,Salted or Smoked								
Cod	9,664	93,905	9.72	12,472	122,806	9.85	+29.1	+ 1.3
Herring	2,650	13,202	4.98	4,579	22,276	4.86	+72.8	- 2.4
Anchovy	4,034	18,867	4.68	2,091	10,116	4.84	-48.2	+ 3.4
Other	1,461	27,187	18.61	1,630	32,257	19.79	+11.6	+ 6.3
Total	17,809	153,161	8.60	20,772	187,455	9.02	+16.6	+ 4.9
Shellfish								
Crawfish	2,200	107,774	48.99	2,380	123,924	52.07	+ 8.2	+ 6.3
Lobster	813	34,888	42.91	998	45,269	45.36	+22.8	+ 5.7
Crab	1,330	9,612	7.23	2,556	19,866	7.77	+92.2	+ 7.5
Crayfish	1,353	20,021	14.80	2,007	28,795	14.35	+48.3	- 3.0
Shrimp	17,336	283,281	16.34	17,890	336,019	18.78	+ 3.2	+14.9
Mussels	34,498	44,377	1.29	38,572	56,002	1.45	+11.8	+12.4
Snails	7,321	92,252	12.60	9,238	137,484	14.88	+26.2	+18.1
Squid	3,249	23,374	7.19	4,802	38,783	8.08	+47.8	+12.4
Cuttlefish	3,076	22,867	7.43	3,861	27,897	7.23	+25.5	- 2.7
Other	13,735	139,386	10.15	16,484	219,312	13.30	+20.0	+31.0
Total	84,911	777,832	9.16	98,788	1,033,351	10.46	+16.3	+14.2
Fish Preparations								
Herring	2,530	20,435	8.08	2,395	23,697	9.89	- 5.3	+22.4
Sardines	11,044	71,371	6.46	10,624	74,233	6.99	- 3.8	+ 8.2
Tunas	19,967	196,950	9.86	21,526	233,165	10.83	+ 7.8	+ 9.8
Fillets	4,452	46,395	10.42	3,567	40,845	11.45	-19.9	+ 9.9
Other	13,680	156,656	11.45	12,837	161,759	12.60	- 6.2	+10.0
Total	51,673	491,807	9.52	50,949	533,699	10.48	- 1.4	+10.1
Shellfish Preparations								
Crab	4,054	134,007	33.06	4,058	149,794	36.91	+ 0.1	+11.6
Other	11,462	162,308	14.16	11,152	185,461	16.63	- 2.7	+17.4
Total	15,516	296,315	19.10	15,210	335,255	22.04	- 0.2	+15.4
TOTAL	373,125	3,131,210	8.39	397,457	3,642,402	9.16	+ 6.5	+ 9.2

Source: D.N.S.C.E.

TABLE 6 : EXPORTS OF FISHERY PRODUCTS FOR HUMAN CONSUMPTION BY MAJOR VARIETY

Variety	JANUARY-DECEMBER						% change	
	1977			1978				
	tonnes	000 F	000 F/t	tonnes	000 F	000 F/t	weight	av. value
Fresh, Chilled or Frozen (ex.Fillets)								
Trout	1,684	19,099	11.34	3,115	31,138	10.00	+ 85.0	- 11.8
Eel	2,699	50,845	18.84	2,927	57,447	19.63	+ 8.4	+ 4.2
Herring	767	2,692	3.51	503	2,457	4.88	- 34.4	+ 39.0
Mackerel	7,586	18,521	2.44	12,206	25,093	2.06	+ 60.9	- 15.6
Tunas	13,217	54,364	4.11	24,809	101,037	4.07	+ 87.7	- 1.0
Sardines	1,893	3,232	1.71	2,999	5,813	1.94	+ 58.4	+ 13.5
Cod	792	5,038	6.36	260	1,604	6.17	- 67.2	- 3.0
Saithe	14,881	43,209	2.90	8,892	32,169	3.62	- 40.2	+ 24.8
Haddock	723	2,878	3.98	492	2,398	4.87	- 32.0	+ 22.4
Sole	723	10,986	15.20	520	9,992	19.22	- 28.1	+ 26.4
Other	19,285	145,946	7.57	21,687	218,809	10.09	+ 12.5	+ 33.3
Total	64,250	356,810	5.55	78,410	487,957	6.22	- 22.0	+ 12.1
Fresh, Chilled or Frozen Fillets								
Cod	1,712	16,111	9.41	1,282	13,232	10.32	- 25.1	+ 9.7
Saithe	435	2,513	5.78	503	3,998	7.95	+ 15.6	+ 37.5
Other	1,386	13,200	9.52	1,595	17,832	11.18	+ 15.1	+ 17.4
Total	3,533	31,824	9.01	3,380	35,062	10.37	- 4.3	+ 15.1
Dried, Salted or Smoked								
Cod	809	8,839	10.93	686	8,313	12.12	- 15.2	+ 10.9
Salmon	280	18,328	65.46	399	21,079	52.83	+ 42.5	- 19.3
Other	2,325	21,343	9.18	2,601	27,096	10.42	+ 11.9	+ 13.5
Total	3,414	48,510	14.21	3,686	56,488	15.33	+ 8.0	+ 7.9
Shellfish								
Crab	2,195	16,468	7.50	2,515	21,872	8.70	+ 14.6	+ 16.0
Shrimp	1,503	36,117	24.03	1,671	44,222	26.46	+ 11.2	+ 10.1
Oysters	2,425	34,147	14.08	2,372	36,627	15.44	- 2.2	+ 9.7
Squid	1,869	19,203	10.27	1,452	15,470	10.65	- 22.3	+ 3.7
Cuttlefish	7,100	35,825	5.05	4,286	20,566	4.80	- 39.6	- 5.0
Other	4,767	47,230	9.91	3,863	54,027	13.99	- 19.0	+ 41.2
Total	19,859	188,990	9.52	16,159	192,784	11.93	- 18.6	+ 25.3
Fish Preparations								
Tunas	796	12,802	16.08	744	12,531	16.84	- 6.5	+ 4.7
Fillets	1,298	8,524	6.57	1,308	9,673	7.40	+ 0.8	+ 12.6
Other	2,116	23,276	11.00	2,072	27,562	13.30	- 2.1	+ 20.9
Total	4,210	44,602	10.59	4,124	49,766	12.07	- 2.0	+ 14.0
Shellfish Preparations	2,160	66,680	30.87	2,556	87,139	34.09	+ 18.3	+ 10.4
TOTAL	97,426	737,416	7.57	108,315	909,196	8.39	+ 11.2	+ 10.8

Source: D.N.S.C.E.

TABLE 7: FRENCH IMPORTS OF COD 1976 TO 1979 (tonnes product weight)

COD	1976 IMPORTS
Fresh or Chilled	22,440
Frozen	640
Fresh or Chilled Fillets	3,553
Frozen Fillets	5,865
Dried	4,029
Salted	3,585
Other	29
Total	40,141
	1977
Fresh or Chilled	20,382
Frozen	1,501
Fresh or Chilled Fillets	2,672
Frozen Fillets	7,753
Dried	4,499
Salted	4,997
Other	160
Total	41,964
	1978
Fresh or Chilled	23,469
Frozen	1,398
Fresh or Chilled Fillets	3,459
Frozen Fillets	7,238
Dried	5,879
Salted	6,240
Other	354
Total	48,037
	1979
Fresh or Chilled	21,649
Frozen Fish	633
Fresh or Chilled Fillets	3,530
Frozen Fillets	10,211
Dried	6,110
Salted	4,993
Other	312
Total	47,438

TABLE 8: IMPORTS OF COD BY MAJOR PRODUCT AND COUNTRY OF ORIGIN

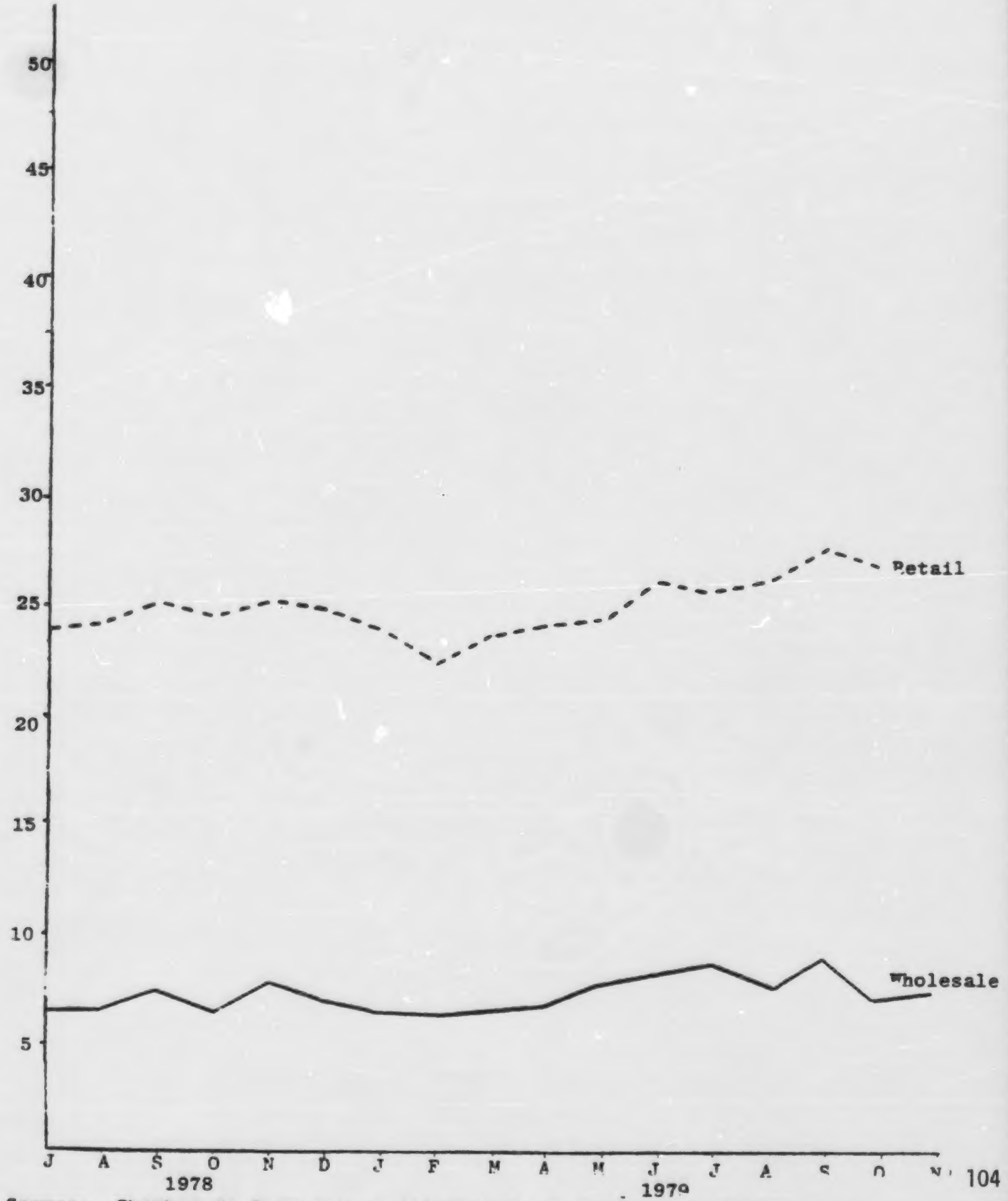
	1978			1979			% change	
	tonnes	000 F	000 F/t	tonnes	000 F	000 F/t	weight	av. value
Fresh or Chilled Fish								
Total	23,469	127,975	5.45	21,649	129,757	5.99	- 8	+ 10
Major Sources								
Denmark	8,371	63,124	7.54	9,393	69,859	7.44	+ 12	- 1
Netherlands	9,013	40,583	4.50	7,954	40,874	5.14	- 12	+ 14
Belgium	4,202	16,168	3.85	2,420	11,341	4.69	- 42	+ 22
Frozen Fillets								
Total	7,238	75,684	10.46	10,211	101,612	9.95	+ 41	- 5
Major Sources								
G.F.R.	5,209	52,682	10.11	8,318	83,145	10.00	+ 60	- 1
Dried								
Total	5,879	67,483	11.48	6,110	71,385	11.68	+ 4	+ 2
Major Sources								
Norway	5,677	65,317	11.51	5,719	67,715	11.84	+ 1	+ 3
Salted not Dried								
Total	6,240	50,945	8.16	4,993	41,654	8.34	- 20	+ 2
Major Sources								
Norway	3,070	26,641	8.68	3,404	28,816	8.47	+ 11	- 2
Faroe Islands	2,384	17,318	7.26	444	3,325	7.49	- 81	+ 3

TABLE 9 : AVERAGE VALUES OF SELECTED SPECIES AT FIRST SALE

F/Kg.

	1975	1976	1977	1978
Cod -Fresh	3.57	4.13	4.83	5.32
-Frozen fillets	4.67	6.77	9.16	10.13
-Salted	N.A.	N.A.	N.A.	N.A.
Saithe -Fresh	1.80	2.03	2.65	3.25
-Frozen fillets	4.48	5.63	7.21	7.80
Whiting	2.34	2.78	3.45	3.34
Hake	7.85	10.43	11.18	12.11
Haddock-Fresh	2.16	2.45	3.08	3.29
-Frozen fillets	4.77	7.61	10.47	9.59

Figure 2: Wholesale and Retail Prices of Cod, F/kg.



Source: Chambre de Commerce et d'Industrie de Boulogne & INSEE - Bulletin Mensuel de Statistique

FRANCE

French Importers of Frozen Fish (1)

(1) Members of the frozen food federation FICUR

Badouix Frères (SARL)
MIN 207 Saumaty,
13016 Marseille Telex: 430 168

*Compagnie du Froid Alimentaire,
33 rue de Mogador,
75429 Paris Telex: 280 440

Dessau A.L. et Cie (S.A.)
38 rue du Louvre
75001 Paris Telex: Aldanpa 680839 F

*Gel au Large (S.A.)
Z.I. de Arsenal, B.P. 220
17304 Rochefort Telex: 790152

Groko-France (S.A.)
EF. STEF, rue Charles-Heller,
94400 Vitry-sur-Seine
Telex: 160907

*La Surgelation Alimentaire,
7 a 11 rue de Verdun,
Dépt. Surgelés, B.P. 278/1,
62201 Boulogne-sur-Mer
Telex: 110049

Ortiz Miko (Ets) (S.A.)
rue Lamartine,
52100 Saint-Dizier Telex: 840642

Servifrais (Sté des Produits) (S.A.)
25 quai de Bérigny, B.P. 6,
76400 Focamp Telex: 190703

Brambilla-Cogros (SA)
214 les bureau de la Colline
Porte D. rue Royalo
92213 Saint-Cloud Telex: 270015

David Fils (S.A.)
76370 Martin Eglise, B.P. 41
76201 Dieppe Telex: 770853

*France - Glaces - Findus (S.A.)
19 cité Voltaire, B.P. 140
75523 Paris Telex: Fraglas 680075

Gre A. et Cie (Ets).
Usine et Entrepôts Frigorifiques
30-32 rue Alexis-Labro,
33130 Begles Telex: 560962

*Iglo, Port de Lille,
place Lerous-de-Fauquemont, B.P. 5
59000 Lille Telex: 612675 F

Motta France,
1 place de la Boule
92000 Nanterre Telex: 612675 F

*Sadifroid (S.A.)
quai de Terre-Neuve, B.P. 8
35400 Saint-Malo Telex: 730 658

*Sofrino (Société Frigorifique
de Normandie) S.A., siège social,
17 rue Dumort-d'Urville
14000 Caen (edex

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* These companies are also producers of frozen fish products.

FRANCE

Major Retail Chains

SGCC (Central Coordinating Office
of French Co-Op movement)
27 quai Le Gallo
92100 Boulogne Telex: 260932

Scagel (Intermarché stores)
24 rue Auguste-Chabrières
75737 Paris Telex: 200469

Paridoc
258 Av Napoléon Bonaparte
92506 Rueil Malmaison Cedex
Telex: 691862

SCA Monoprix
3 rue Paul Cézanne
75008 Paris

Primistères/Felix Potin,
53 rue Verdun
93123 La Courneuve Telex: 220549

Francap
7 place d'Iéna
75783 Paris

Nouvelles Galeries
66 rue des Archives
75150 Paris Telex: 210649

Sapac Prisunic
25 rue des Antilles
Zone des Entrepòts
94538 Rungis Cedex Telex: 203854
203847

Camas
1 rue Talleyrand
51003 Reims Cedex

STE Bergis
31 rue du Limousin
Bat. V1P Viande 121
94515 Rungis Cedex

Some National Catering Companies

Scapa-Jacques Borel
1 rue du Puits Dixme
Senia 524
94577 Rungis Telex: 260760

Euroviv/Wagons Lit
17 rue Froment
75011 Paris

Wholesale Chains and Distributors

Pomona Surgelés,
1 rue des Galcières
94150 Min Rungis Telex: 260064

Union Francaise du Surgelé
38 rue du Mont-Thabor
75001 Paris Telex: 220131

The West German Market for Groundfish

INTRODUCTION

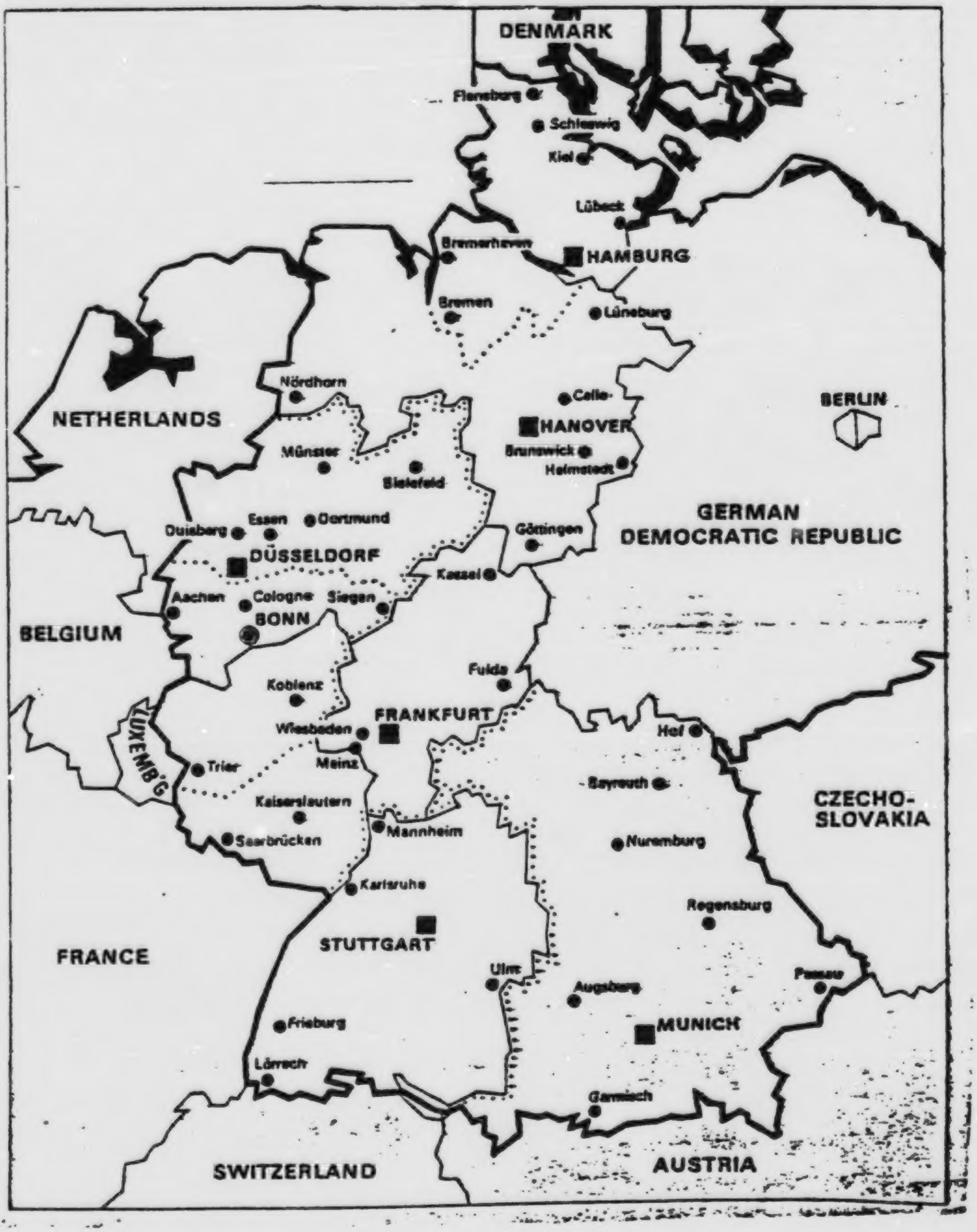
The population of the G.F.R. at the end of 1978 was some 61.3 millions, divided between some 21.4 million households. The major centres of population are West Berlin, Hamburg, Munich and Cologne, all of which have more than a million inhabitants. Other large towns with more than half a million inhabitants are Essen, Dusseldorf, Frankfurt and Dortmund.

The Federal Republic consists of 11 states or Lander, and the fishing industry is concentrated around the 4 coastal states of Hamburg, Lower Saxony, Schleswig-Holstein and Bremen. The two major ports are Bremerhaven and Cuxhaven.

The German fishing industry has seen its total catch fall from 591.4 thousand tonnes in 1970 to just 394.7 thousand tonnes in 1978 (see Table 1), excluding direct landings in foreign ports. The total value of the catch in 1978 was 395.0 million D.M., a drop of 9 per cent over the 1977 total value, despite the 1978 catch being slightly greater in terms of tonnage.

The main problems affecting the German fishing industry are exclusion from traditional fishing grounds; the lack of an EC Common Fisheries Policy; the high price of fuel; and the high retail price of fish in relation to competing foodstuffs. However, it is likely that the worst of the problems have been absorbed, and the industry should be able to reorganise itself. The deep sea trawler fleet caught some 292.0 thousand tonnes of fish in 1978 (including direct landings into foreign ports), approximately the same as in 1977. The major groundfish species sought by the Germans are cod, redfish, saithe and haddock. Table 1 shows that catches of these 4 species in 1978 were well below their 1970 level, with the cod fishery suffering the most, dropping by 58 per cent between 1970 and 1978. In place of these more /

Figure 1: Principal Towns in G.F.R.



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more traditional species the Germans started to catch more catfish, grenadier, and blue whiting, but marketing problems have led to effort in this direction being reduced.

Flounder is not an important species in the G.F.R., the most important flatfish being plaice.

Table 2 gives landings and values of the three major groundfish species for the period 1974-1978 by major product. It can be seen that, in the case of cod, the tendency has been for landings of fresh fish to increase, while a smaller percentage of landings has been in the form of frozen fillets (both skinless and skin-on). This is a result of the G.F.R.'s exclusion from traditional distant fishing grounds, as a higher percentage of the catch is taken by non-freezer vessels.

IMPORTS

Tables 3, 4 and 5 show the G.F.R.'s imports of cod, saithe and redfish. Despite the poor cod fishery imports of this species are not as high as one might have expected, and they certainly have not risen by the same amount as landings have fallen. Most of the imports come from Europe. Canada supplied some 1,540 tonnes of frozen fillets in 1977, but none in 1978. Although year-end figures for 1979 are not yet available, in the period January to November 1979 the G.F.R. imported just over 100 tonnes from Canada. While visiting the G.F.R. to undertake field research, it was found out that a major stumbling block to would-be Canadian exporters is the fact that fresh cod can be imported more cheaply from Europe than frozen cod from Canada. Processors and of course housewives prefer the fresh fish, the former to enable the value added from processing the

fish /

fish to accrue to themselves, the latter for the "freshness". Another prospective barrier to trade is the fact that in Denmark, fish processors need only pay their employees while they are actually working. If, for example, a firm has enough supplies for only a morning's work, the employees can be effectively "paid off" for the afternoon, with the remainder of their salaries paid by the Danish government. In this way labour overheads are reduced.

Importers and processors who were visited in the G.F.R. were generally pleased with the quality of fish imported from Canada. Herring was, of course, the main species imported, but importers expressed the view that if the herring imported was of good quality then imports of other species would be on a par.

Imports of fresh or chilled saithe in 1978 amounted to 17.6 thousand tonnes, a drop of 26 per cent over the 1977 total. However, at 7,000 tonnes, imports of frozen saithe fillets in 1978 were over 200 per cent greater than the 1977 figure of just 2,300 tonnes. The major supplier in 1978 was the Faroe Isles, sending 2,260 tonnes at an average value of 331 DM/t.

Saithe is a popular fish in the G.F.R. Much of it is salted, coloured and smoked and sold sliced in cellophane packs as a cheaper alternative to smoked salmon.

Redfish, too, is very popular, particularly in southern Germany. It is boiled or fried. Iceland is the major supplier of redfish to the G.F.R., sending 2,200 tonnes of fresh or chilled redfish in 1978, against 800 tonnes in 1977. Fish merchants who were visited in the G.F.R. spoke of a daily need for /

for redfish, so if landings were poor then imports had to be brought in. As with the other two major groundfish species, most of the supplies came from Europe. Prospects for Canandian groundfish being exported to the G.F.R. would seem to depend on the supply position in other European countries, and on the price at which Newfoundland might offer the fish.

A list of fish merchants and firms is given at the end of the report.

CHANNELS OF DISTRIBUTION

As in other countries the tendency has been for large retail groups to flourish at the expense of independent retailers, especially in the grocery trade. The share of the total retail turnover has increased from 31.2 per cent in 1970 to 36 per cent in 1977 (Source: German Institute for Economics). Hypermarkets especially have developed rapidly, and it is estimated that their share of the total retail market is around 10 per cent. Some of this growth has been at the expense of department stores, who have been obliged to open branches in city suburbs and out-of-town shopping centres to maintain their share of the market.

A breakdown of the percentage share of the total retail trade for various retail outlets is given below:-

	Specialist	Retail	Department stores	Mail Order	Co-operatives
1965	72.4	11.1	9.3	4.2	3.0
1974	65.3	16.5	10.4	4.7	3.1
1975	64.4	17.5	10.4	4.6	3.1
1976	64.4	17.9	9.9	4.7	3.1
1977	64.0	18.6	9.5	4.8	3.1

Source: British Overseas Trade Board

Specialist /

Specialist shops are considered as having 1-4 branches. Retail outlets have more than 5 branches.

Table 6 gives the percentage share of the total market for fish for various types of outlets for the year 1977. The most important outlet for fresh fish is still fishmongers, but in the case of frozen fish the major outlet, with 32 per cent was departments of food stores, followed by food departments in department stores. Many of these stores are hypermarkets having fresh food counters.

There are three major brands of retail-packed frozen fish steaks, fish fingers, fish in sauce, etc. These are Iglo (part of Birds Eye), Tiko and Schottke. Iglo especially is very strong.

CONSUMPTION

From Table 7 it can be seen that annual per capita consumption of fish has averaged around the 10 kg. (catch weight) mark. Consumption of competing foods is given as well. In terms of fillet weight the figure has been revolving around 4 Kg./caput since 1969/70.

A more detailed breakdown of fish consumption (product weight) is given in Table 8. With reference to groundfish the two categories to be considered are fresh fish and frozen fish. The four species of groundfish preferred by the German housewife are redfish, cod, saithe and haddock, according to Herr Marr of the Bundesverband der Deutschen Fischindustrie und des Grosshandels, who was contacted as part of the field research. Because of his position as Secretary of this body, Herr Marr also sat on the board of FIMA - the Fish Marketing Institute which, among other things, decides on advertising policy. It is funded by /

by a levy on landings which is raised by the Government and then passed on to FIMA. According to Herr Marr the current high level of fish prices meant that most of the advertising budget had to be directed towards persuading people to maintain their level of fish consumption, rather than encouraging them to try new species. Such compaigns had been undertaken, but Herr Marr expressed the view that they had been too patchy and too short to be effective.

As might be expected, consumption of fresh fish has declined from 1.58 kg./caput/annum in 1965 to just 0.82 kg. in 1976, while consumption of frozen fish has risen from 0.26 kg. to 0.72 kg. in the same period. The advent of frozen fish has meant that seasonal fluctuations have declined. Rather than seasonality, it is geography which has an important role, for consumption of fish in the coastal areas of the G.F.R. is probably around 10 times the national average, while the further south one travels, the less fish is consumed. There are historical reasons for this, for regions which did not traditionally have access to fish have developed their own dishes from their particular resources. However, once again, the advent of frozen fish should help increase fish consumption in non-coastal areas.

The market for frozen fish produce for the period 1973-1978 is given in Table 9, along with that of meat and game. The market for the former was quite steady during the period in question, with perhaps a slight fall in household consumption being offset by a rise in institutional purchases. This relative stagnation accounts for the fact that the fish accounted for just 11 per cent of the total frozen food market, against 15 per cent in 1973. It is not the case that new frozen fish products are /

are not being developed, just that other foods are being offered in frozen form. The market share, for example, of frozen meat and game has risen from 3.6 per cent to 4.4 per cent during the 6 year period in question.

While in Hamburg a typical shop was visited to see what fish products were on sale. The store chosen was a largish supermarket in a shopping area, and the following frozen fish products were observed

Cod fillets - 400 g. - DM 3.98
Plaice fillets - 250 g. - DM 3.99
Saithe fillets - with mushroon sauce - 400 g. - DM 4.48
- a la bordelaise - 400 g. - DM 4.48
Hake fillets, breaded - 400 g. - DM 3.18

The law requires that the net weight of the contents be clearly marked on the retail pack, together with the actual weight of the fish content if the fish is cooked in a sauce, for example. In this case a minimum weight of fish is specified. A minimum weight of 120 g. of fish is required in a 200 g. net weight pack of prepared fish. The country of origin must also be marked.

Frozen fish soup was also available in the freezer cabinet. A 250 g. pack, 4 servings, cost DM 3.68.

As mentioned earlier, smoked saithe was available as a cheaper alternative to smoked salmon.

A more detailed breakdown of frozen fish consumption is given in Table 10 covering the years 1977 and 1978. In 1978 some 26 per cent /

cent of all frozen fish consumed was in the form of fish fillets, but whole fish accounted for over 57 per cent. Freshwater fish and "other" products were of lesser importance.

Herr Marr talked of two "forces" as far as consumption of food is concerned - a need for frozen and other convenience foods as more and more women go out to work, countered by a desire to get back to more natural foods among some more "aware" people.

PRICES

Annual average landed values for selected groundfish species for the period 1970 and 1979 are given in Table 11, and Figure 2 gives average monthly values for the period January 1978 to August 1979.

As far as the annual averages are concerned, there has been a steady increase over the years. However, the increases have been generally greater in the case of filleted rather than unfilleted fish. For example, the average value of fresh cod rose by 69 per cent between 1970 and 1978, while that of frozen cod fillets rose by 144 per cent. Similarly, fresh redfish increased by 77 per cent during the period in question, while frozen fillets of redfish rose by 102 per cent.

From Figure 2 it can be seen that prices tend to be lower during the early summer months for haddock and saithe, while that of cod tends to fall during the later summer months.

Annual average retail prices of selected items of food for the same period 1970-78 are given in Table 12, and it can be seen that fish prices have risen faster than prices of competing items such as pork chop and chicken. In fact, the price of chicken rose by just 20 per cent during the period in question, while the price of saithe fillet rose by 111 per cent, and that of frozen redfish fillet by 107 per cent.

Figure 3 gives retail prices of selected groundfish species for the period January 1978 to October 1979. The most stable is prepacked redfish fillets, while the prices of the fresh and unpacked fillets tend to fluctuate, dropping in the summer months and rising again in winter.

Fresh fish is the most price elastic in terms of demand, and consumption also drops when the prices of competing products fall. According to Herr Marr, a 25 per cent increase in the retail price of fresh fish in the first months of 1979 led to a 25 per cent drop in consumption of fresh fish.

TABLE 1 : CATCHES OF MAJOR SPECIES, 1970-1978

Tonnes

	Cod	Haddock	Saithe	Redfish	Other	Total
1970	174,335	8,858	60,433	71,552	276,233	591,411
1971	193,191	5,980	60,202	70,229	162,958	492,560
1972	147,346	6,154	69,074	59,951	122,601	405,126
1973	115,163	13,224	90,328	61,312	175,586	455,613
1974	152,626	23,416	78,250	57,795	180,883	492,970
1975	119,944	22,781	77,027	54,020	160,265	434,037
1976	106,383	20,148	102,060	54,700	142,540	425,831
1977	88,475	8,267	67,737	82,268	147,760	394,507
1978	72,816	3,352	44,247	58,837	215,448	394,700

Sources: Statistisches Bundesamt
Bundesministerium für Ernährung, Landwirtschaft
und Forsten

TABLE 2 : LANDINGS AND VALUES OF SELECTED SPECIES FOR HUMAN CONSUMPTION*

		1974		1975		1976		1977		1978
		'000 tonnes	million DM	'000 tonnes	million DM	'000 tonnes	million DM	'000 tonnes	million DM	'000 tonnes
COD	- Fresh	35.3	51.0	30.0	33.4	41.1	45.3	44.1	58.4	47.8
	- Frozen Fillets	22.3	83.3	7.6	22.9	Neg.	Neg.	3.9	16.8	1.7
	- Frozen Fillets, Skinless	11.9	57.0	15.2	54.9	16.1	61.7	3.4	17.9	0.9
	- V Cut	1.9	3.7	2.2	3.2	1.9	2.7	1.1	2.4	0.3
	- Headless	0.4	0.6	1.3	2.0	0.7	1.3	3.9	5.5	0.7
	- Head On	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	0.3	0.4	Neg.
	- Total	71.8	195.6	56.3	116.4	59.8	111.0	56.7	101.4	51.4
REDFISH	- Fresh	38.5	58.2	35.0	54.6	38.6	60.0	39.7	66.0	28.6
	- Frozen Fillets	1.3	4.5	1.5	5.2	2.1	7.2	6.7	26.5	3.4
	- Frozen Fillets, Skinless	0.1	0.4	Neg.	Neg.	0.1	0.4	Neg.	Neg.	-
	- V Cut	Neg.	Neg.	-	-	-	-	Neg.	Neg.	-
	- Headless	4.1	6.5	0.2	0.3	0.5	0.9	5.4	11.4	5.8
	- Head On	-	-	-	-	-	-	0.4	0.5	Neg.
	- Total	44.0	69.6	36.7	60.1	41.3	68.5	52.2	104.4	37.8
SAITHE	- Fresh	36.6	43.4	28.9	31.1	31.2	32.9	25.2	33.5	19.5
	- Frozen Fillets	9.8	26.9	8.4	18.7	Neg.	Neg.	8.1	21.1	5.1
	- Frozen Fillets, Skinless	1.9	6.4	6.9	19.3	24.4	64.1	4.5	15.0	0.9
	- V Cut	0.3	0.5	0.9	1.2	1.7	2.4	1.3	2.5	0.6
	- Headless	-	-	Neg.	Neg.	-	-	1.8	2.1	1.0
	- Head On	-	-	-	-	Neg.	Neg.	-	-	Neg.
	- Total	48.6	77.2	45.1	70.3	57.3	99.4	40.9	74.2	27.1

* Excludes exported fish

Source: Statistisches Bundesamt

TABLE 3: IMPORTS OF COD

	1977 tonnes	1977 000 DM	1977 000 DM/t	1978 tonnes	1978 000 DM	1978 000 DM/t	% change weight	% change av. value
Fresh or Chilled	5,602	13,034	2.33	4,823	12,000	2.49	- 14	+ 7
Denmark	2,375	7,965	3.35	2,785	8,596	3.09	+ 17	- 8
Iceland	1,763	2,726	1.55	1,225	1,718	1.40	- 31	- 10
Netherlands	905	1,488	1.64	357	977	2.74	- 61	+ 67
Frozen	1,278	2,731	2.14	717	1,874	2.61	- 44	+ 22
Denmark	703	1,427	2.03	276	591	2.14	- 61	+ 5
Fresh or Chilled Fillets	324	1,584	4.89	1,026	4,678	4.56	+217	- 7
Denmark	176	873	4.96	826	3,763	4.56	+369	- 8
Frozen Fillets	4,425	21,717	4.91	2,048	8,992	4.39	- 54	- 11
Canada	1,541	8,321	5.40	*	*	N.A.	N.A.	N.A.
Denmark	1,294	6,117	4.73	363	1,417	3.90	- 72	- 18
Norway	823	3,887	4.72	1,125	5,097	4.53	+ 37	- 4
Dried, Salted or Smoked	1,025	6,464	6.31	1,308	6,604	5.05	+ 28	- 20
Norway	979	6,268	6.40	1,006	6,018	5.98	+ 3	- 7

* Nil

Source: Statistisches Bundesamt

TABLE 4: IMPORTS OF SAITHE

	1977			1978			% change	
	tonnes	000 DM	000 DM/t	tonnes	000 DM	000 DM/t	weight	av. value
Fresh or Chilled	23,905	35,108	1.47	17,643	28,213	1.60	- 26	+ 9
France	9,346	13,684	1.46	6,651	10,655	1.60	- 29	+ 10
Denmark	4,913	8,236	1.68	3,117	5,294	1.70	- 37	+ 1
Netherlands	3,722	4,437	1.19	2,726	3,528	1.29	- 27	+ 8
Iceland	2,440	4,422	1.81	2,927	5,107	1.74	+ 20	- 4
Poland	1,899	1,737	0.91	*	*	N.A.	N.A.	N.A.
Frozen	1,566	2,256	1.44	1,558	2,912	1.87	- 1	+ 30
France	1,014	1,564	1.54	808	1,494	1.85	- 20	+ 20
Fresh or Chilled Fillets	3,501	10,514	3.00	3,387	11,746	3.47	- 3	+ 16
Denmark	2,572	7,609	2.96	2,425	8,161	3.37	- 6	+ 14
Frozen Fillets	2,298	6,336	2.76	7,013	22,308	3.68	+205	+ 15
Denmark	854	2,432	2.85	1,946	6,193	3.18	+128	+ 12
Faroe Isles	378	1,139	3.01	2,258	7,476	3.31	+497	+ 10
Iceland	156	490	3.14	1,052	3,413	3.24	+574	+ 3
Dried or Salted	2,754	8,810	3.20	3,067	9,315	3.04	+ 11	- 5
Iceland	1,994	7,134	3.58	1,755	6,855	3.91	- 12	+ 9
Norway	662	1,285	1.94	955	1,755	1.84	+ 44	- 5

* Nil

Source: Statistisches Bundesamt

TABLE 5:IMPORTS OF REDFISH

	1977			1978			% change	
	tonnes	000 DM	000 DM/t	tonnes	000 DM	000 DM/t	weight	av. value
Fresh or Chilled	2,490	3,780	1.52	3,607	5,993	1.66	+ 45	+ 9
France	859	1,343	1.56	549	1,001	1.82	- 38	+ 17
Iceland	807	1,150	1.43	2,190	3,343	1.53	+171	+ 7
Frozen	761	1,365	1.79	555	1,082	1.95	- 27	+ 9
Norway	352	707	2.01	192	396	2.06	- 45	+ 2
Fresh, Chilled or Frozen Fillets	603	2,423	4.02	791	3,427	4.33	+ 31	+ 8

Source: Statistisches Bundesamt

TABLE 6 : PERCENTAGE SHARE OF VARIOUS OUTLETS FOR FISH MARKET, 1977

	Fresh Fish	Frozen Fish	Fish in Brine	Canned Fish	Smoked Fish	Fish Specialities	Fischsalate
Fishmongers	56	14	27	7	49	66	49
Itinerant merchants	9	2	3	1	5	3	1
Weekly markets	14	2	5	1	8	3	3
Food depts. of Department stores	8	27	18	26	13	9	16
Discount stores	3	24	22	34	9	8	14
Supermarkets with fish departments	11	32	26	32	16	12	17
TOTAL	100	100	100	100	100	100	100

Figures may not add up due to rounding

Source: Fischwirtschaftliches Marketing - Institut

TABLE 7 : CONSUMPTION OF SELECTED ITEMS OF FOOD

Kg/caput/annum

	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76	1977/78	1978/79
Beef	21.5	22.1	21.6	20.5	20.8	20.6	21.3	21.7	22.1
Pork	37.3	40.2	41.4	42.0	41.3	43.7	43.7	44.7	46.8
Poultry	7.9	8.6	8.8	9.0	8.7	8.8	9.1	9.1	9.6
Fish - catch weight	10.5	11.4	9.8	9.5	11.0	10.9	9.7	10.3	10.3
- filleted weight	4.0	4.4	3.7	3.6	4.2	4.1	3.8	3.9	3.9

Source: German Statistical Yearbook, 1979

TABLE 8 : CONSUMPTION OF FISHERY PRODUCTS

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Fresh fish (fillet weight)	1.58	1.02	1.04	0.82	0.93	0.82	0.72	0.82	N.A.	N.A.
Herring (fresh)	0.17	0.10	0.10	0.10	0.08	0.08	0.08	0.08	N.A.	N.A.
Frozen fish	0.26	0.64	0.55	0.56	0.59	0.60	0.64	0.72	N.A.	N.A.
Smoked fish	0.40	0.36	0.31	0.31	0.32	0.33	0.31	0.33	0.31	0.30
Sardines & Tuna - Prepared or Preserved	0.52	0.37	0.28	0.37	0.38	0.30	0.35	0.42	0.32	0.37
Fischsalat	0.12	0.22	0.22	0.25	0.26	0.24	0.27	0.31	0.34	0.25
Shellfish	0.18	0.22	0.24	0.25	0.27	0.30	0.41	0.45	0.38	0.41
Other	2.73	2.73	2.61	2.76	2.88	2.78	2.78	2.96	N.A.	N.A.
Total	5.96	5.66	5.35	5.42	5.71	5.45	5.56	6.09	5.99	5.97

(P) Provisional

Source: Institut für Landwirtschaftliche Marktforschung

G.F.R. - MARKET FOR DEEP FROZEN FISH AND FISHERY PRODUCTS

TABLE 9 : CONSUMPTION OF SELECTED DEEP FROZEN FOODS

	FISH AND SHELLFISH					MEAT AND GAME*				
	Household Consumption (tonnes)	Inst'nl. Consumption (tonnes	Total Consumption (tonnes)	% of Total Frozen Food Market	Per Capita Consumption (grammes)	Household Consumption (tonnes)	Inst'nl. Consumption (tonnes)	Total Consumption (tonnes)	% of Total Frozen Food Market	Per Capita Consumption (grammes)
1973	24,626	17,392	42,018	15.0%	-	4,277	5,721	9,998	3.6%	-
1974	24,044	16,590	40,634	13.8%	-	3,476	6,852	10,328	3.5%	-
1975	24,927	19,309	44,236	13.8%	-	4,165	5,970	10,135	3.2%	-
1976	27,822	21,202	49,024	14.2%	795	4,509	9,837	14,346	4.2%	232
1977	25,276	20,403	45,679	12.4%	-	3,688	12,773	16,461	4.5%	-
1978	24,613	20,232	44,845	11.0%	732	N.A.	N.A.	17,689	4.4%	289

* Excludes Poultry

Source: Deutsches Tiefkuhlsinstitut e V

TABLE 10 : HOUSEHOLD AND INSTITUTIONAL CONSUMPTION OF DEEP FROZEN FISHERY PRODUCTS

Tonnes

Product	1977			1978		
	Household	Institutional	Total	Household	Institutional	Total
Fish Fillets	7,352	4,450	11,802	7,125	4,578	11,703
Fish	15,940	11,554	27,494	15,433	10,181	25,614
Freshwater Fish	1,299	763	2,062	1,308	1,050	2,358
Other	685	3,636	4,321	747	4,423	5,170
Total	25,276	20,403	45,679	24,613	20,232	44,845

Source: Deutsches Tiefkuhlsinstitut e V

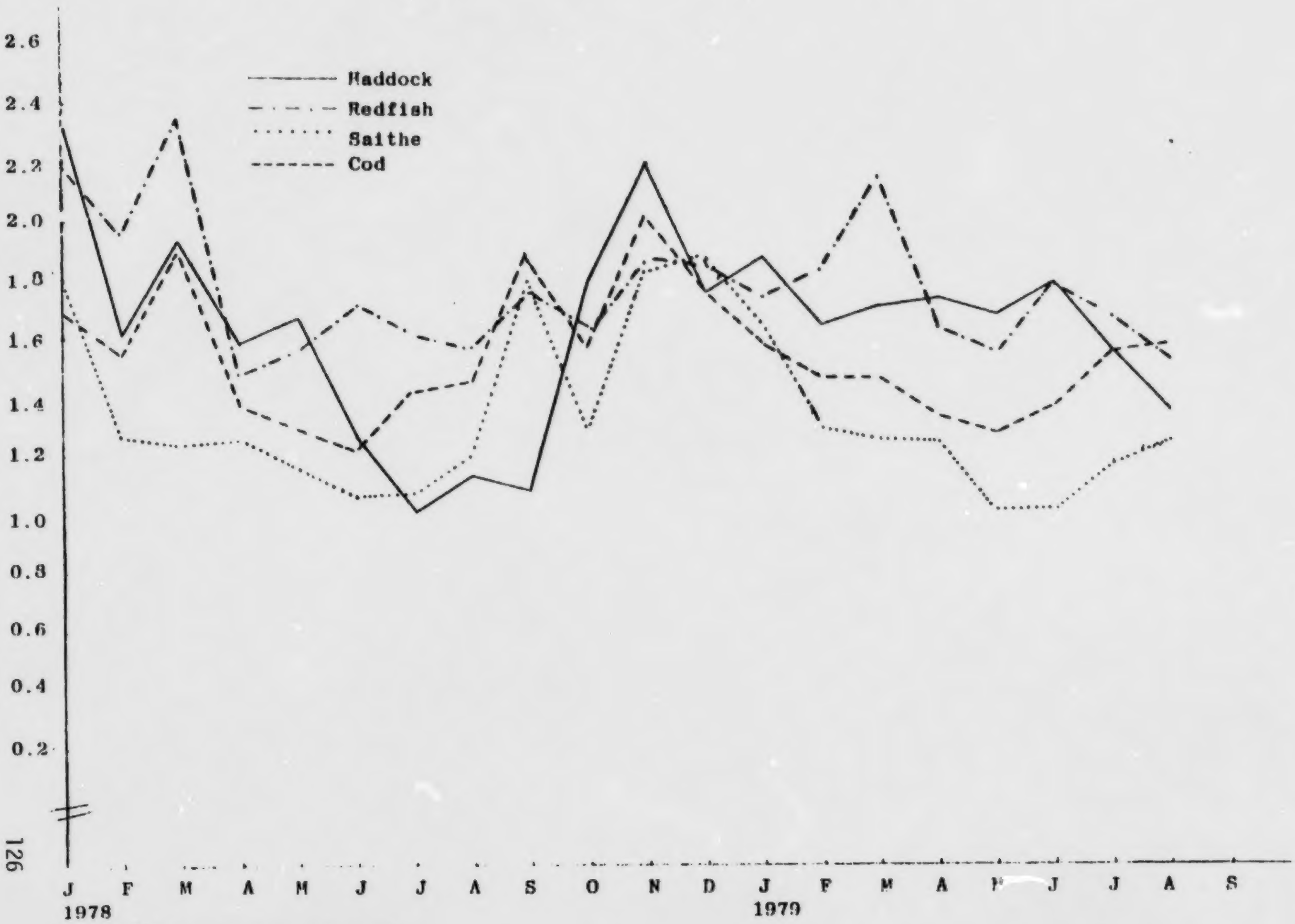
TABLE 11: AVERAGE VALUES OF MAJOR SPECIES FOR HUMAN CONSUMPTION

Pf. per Kilo landed weight

	Cod Fresh	Cod Fillet Frozen	Saithe Fresh	Saithe Fillet Frozen	Redfish Fresh	Redfish Fillet Frozen
1970	75.5	177.0	65.2	165.8	99.7	203.0
1971	81.1	259.5	68.3	201.9	103.0	284.0
1972	89.3	271.5	80.8	171.7	124.5	286.0
1973	121.3	297.0	102.1	201.4	145.6	312.0
1974	144.8	373.7	118.7	275.4	151.3	358.5
1975	111.0	301.4	107.6	222.2	156.0	340.8
1976	110.3	344.6	105.7	248.0	155.3	337.6
1977	132.6	433.3	132.6	261.6	166.0	396.7
1978	127.6	431.6	133.3	307.2	176.9	410.5

Source: Statistisches Bundesamt

Figure 2
G.F.R.: Auction Prices* of Selected Species for Human Consumption, DM/kg.



* Landed by deep sea vessels
Source: Statistisches Bundesamt

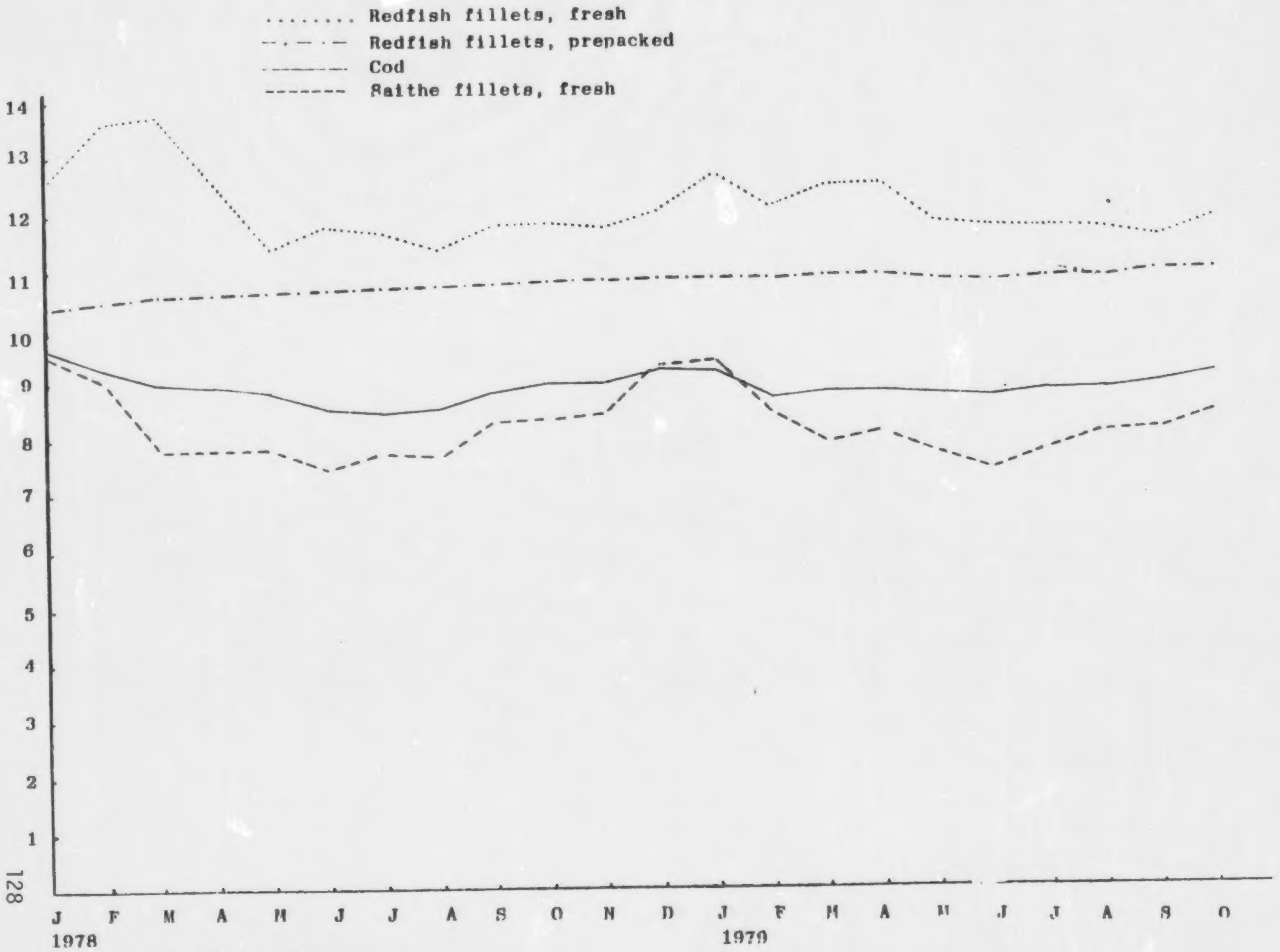
TABLE 12: RETAIL PRICES OF SELECTED ITEMS OF FOOD

DM/kg

	Saithe Fillet	Redfish Fillet	Redfish Fillet Frozen	Cod Fillet	Cod Headless	Beef	Pork Chop	Chicken
1970	3.91	6.45	5.15	5.13	4.59	6.32	8.40	4.00
1971	4.32	7.16	6.25	5.61	5.07	6.28	8.13	3.87
1972	4.74	7.91	7.13	6.37	5.75	7.14	8.75	3.84
1973	5.57	9.13	7.53	7.53	6.80	8.06	9.79	4.36
1974	6.43	9.73	8.39	8.55	7.68	8.00	9.90	4.67
1975	6.25	10.16	9.47	6.88	7.64	8.32	10.15	4.48
1976	6.78	10.45	9.64	7.66	8.09	8.83	11.13	4.78
1977	7.34	11.34	9.97	8.48	8.91	8.83	11.07	4.84
1978	8.25	11.95	10.65	8.27	8.96	9.50	11.09	4.80

Source: Bundesministerium für Ernährung, Landwirtschaft und Forsten

Figure 3
G.F.R.: Retail Prices of Selected Species, DM/kg.



Source: Statistisches Bundesamt

German Federal Republic

Importers

(a) Fish Merchants

G. Friedrichs Kg,
Borselstr. 26,
2000 Hamburg 50.
Telex: 213224

Fimex Gmbh,
Gr. Elbestr. 133,
2000 Hamburg 50.
Telex: 212564

Deutsche Fischkonserven Fabriken Gmbh,
Gr. Elbestr. 160,
2000 Hamburg 50.

Internationale Fischhandels Co. Gmbh,
Postfach 59,
2850 Bremerhaven 29.
Telex: 238884

F.W. Luebbert,
Wittlingstr.,
2850 Bremerhaven 29.
Telex: 238641

F. Schottke Gmbh,
Am Lunedich,
2850 Bremerhaven 29.
Telex: 238773

Westfalia Fischindustrie
Halle X/15,
2850 Bremerhaven.
Telex: 238826

Hussman & Hahn,
Niedersachsenstr.
2190 Cuxhaven - F.
Telex: 232151

(b) Central Purchasing Organisations

Edeka Zentrale AG,
New York Ring 60 0680
2000 Hamburg 60.
Comprises 45 wholesale operational and over 14,000 retail outlets
Telex: 21930 EZO D

Rewe Zentrale AG,
Jakordenstrasse 3,
5000 Koln 1.
Comprises 33 wholesalers and 8,000 retailers.
Telex: 8885206 a/b KZO D

Forum Gmbh,
Sonninstr. 16-18,
2000 Hamburg 1.
Part of the Co-op group in the G.F.R. which deals with food.
Telex: 211005 FOHA D

Gemeinschaft Deutscher Einkaufstore, Telex: 411570
Einkaufskontor des Nohrungsmittelgrosshandels Gmbh,
Konigsteinerstr. 86,
6230 Frankfurt 80.

Deutsche Spar Handelsgesellschaft Gmbh, Telex: 0411843
Walter-Kolb-Strasse 9-11,
6000 Frankfurt 60.

Z H G Gmbh, Telex: 0411582 a/b ZHGA D
Eschenheimer Anlage 28,
6000 Frankfurt.

(c) Purchasing Organisations for Independent Department Stores

Kaufring Gmbh, Telex: 1858493 a/b KIR D
Kieshecker - Weg 100,
Postfach 754,
4000 Düsseldorf.

H K G Zentrale, Telex: 8881140
Max - Planck - Strasse 8,
5020 Frechen-Marsdorf.

(d) Department Stores

Karstadt AG, Telex: 867887
Theodor Althoff Str. 2,
4300 Essen-Bredeny.

Kaufhof AG, Telex: 08881371-76 KHF D
Leonard-Tietz-Str. 1,
5000 Kòln 1.

Horten AG, Telex: 858 4411
Am Seestern,
4000 Düsseldorf.

The United Kingdom Market for Groundfish

INTRODUCTION

Like that of most Western European countries, the fishing industry of the U.K. contributes little to the GDP - accounting for only 0.175 per cent in 1976. However, the changing fisheries regime has drawn attention to the importance of the fishing industry in the U.K. to certain regions, especially Humberside (Hull and Grimsby).

In recent years, the British fishing industry has been faced with a number of problems most of which stem from the general extention of fishing limits to 200 miles. The vessels most affected were those of 140 ft. and over which traditionally fished distant waters, principally Icelandic and Norwegian. Landings made by these vessels declined by 75 per cent between 1973 and 1978 and the number of vessels fell from 168 to 77 over the same period and a further 19 left the fleet during 1979.

This had disastrous effects on the three 'distant water' ports of Hull, Grimsby and Fleetwood bringing unemployment amongst fishermen, merchanting firms and, more recently, processing firms. In five years the number of regularly employed fishermen in the U.K. as a whole fell from 19,110 in 1973 to 16,467 in 1978, most of this being attributable to these three ports.

British catches of the most popular species of cod, were the worst effected by reduced fishing effort enforced in third country waters, declining by more than 50 per cent in the five year period, 1974-1978. During the same period, haddock catches were stable until 1978 when a combination of smaller quotas in third /

third country waters and a lower allocation of the TAC in the North Sea, brought about a decline of one-third. Catches of the dearest of the three staple varieties, plaice, were more or less unchanged but those of saithe fell by about 40 per cent.

To meet the shortfall in domestic production greater amounts of groundfish were imported into the U.K. principally from Norway, Iceland, Denmark, West Germany and latterly the Netherlands and Canada. Over the five year period ending 1978 the growth in imports of fresh and frozen groundfish exceeded 70 per cent.

U.K. imports of all fish and fish products for human consumption were worth £258 m. (c.i.f.) whereas U.K. exports of the same brought in £144 m. (f.o.b.) giving a deficit of £114 m. For groundfish the deficit in 1978 was approximately £92 m. Exports of groundfish from the U.K. were thought to be too small to warrant analysis in this report.

The consumption of fish in the U.K. has been declining since the last war but the rate of decline for groundfish appears to be slower over the past five years. There is no strong evidence that less popular species such as saithe and whiting are being substituted for cod or haddock to any great extent except perhaps in breaded or battered form where the species are not necessarily specified.

PRODUCTION:

(i) Domestic Landings

British landings of groundfish intended for human consumption (i.e. excluding industrial species) amounted to 390,000 tonnes in 1978 representing a reduction of 15 per cent on those in 1977 and 34 per cent on those in 1974. This decline was, for the most part, attributable to the diminution of cod landings brought about by the curtailment of fishing opportunities in third country waters, particularly Icelandic and Norwegian. As Table 1 shows, landings of cod by British vessels fell by 53 per cent over the five year period. Haddock landings were fairly steady over the period until 1978 when a combination of a reduced allocation in the North Sea and lower quotas in third country waters produced a drop of one-third. Landings of whiting and, to a lesser extent, plaice and dogfish improved over the period increasing by 45, 10 and 13 per cent respectively.

During the first nine months of 1979 British vessels landed nearly 278,000 tonnes of groundfish intended for human consumption. Table 2 indicates that, compared with landings in the corresponding months of 1978, 312,000 tonnes, this represents a decline of 34,000 tonnes or 11 per cent. The major two species landed, cod and haddock, dropped in quantity by about 12,000 tonnes. Saithe landings in the first three quarters of 1979 were nearly 10,000 tonnes or 36 per cent lower than during the comparative months of 1978. This was largely the result of reduced allocations in third country waters, principally Norwegian, where U.K. catches fell by some 7,000 tonnes or 70 per cent below the level in 1978. All the landings of major species realised higher prices in 1979 than in 1978, the most notable being those for dogfish, saithe and whiting which were respectively 17, 15 and 12 per cent higher.

(ii) /

(ii) Domestic Production of Quick Frozen White Fish Products

Over the past 25 years the production of quick frozen white fish products in the United Kingdom has increased tenfold. As is seen in Table 3 the rise was from 13,000 tonnes in 1953 to nearly 130,000 tonnes in 1977. In the early sixties the majority of these products was in the form of 'Catering Packs' but by the mid sixties it was 'Consumer Packs'.

During 1978, the production was 116,000 tonnes, nearly ten per cent lower than that in the previous year, with respective decreases in catering and consumer packs of 12 and 8 per cent. In landed weight terms this was 245,000 tonnes and accounted for almost 23 per cent of total supplies of 'Human Consumption' species. For groundfish rather than white fish species the proportion is estimated to be around one-third. In fact, the reduction in the proportion which frozen fish products represents of supplies of human consumption species was caused by the greater domestic landings of pelagic species, particularly mackerel and sprats, a market for which is not easily found in the U.K.

Figure 1 shows that most of frozen white fish production was categorised as other boneless, most of which, approximately two-thirds, is estimated to be fish sticks/fingers. The quantity of frozen white fish fillets produced in the United Kingdom accounted for roughly one-quarter of the total in 1978 compared with one-third in 1975. This decline is probably the result of the increased availability of 'shatter packs' of fillets from abroad which are ready for sale to caterers and institutions.

IMPORTS:

During 1979, the United Kingdom imported almost 198,000 tonnes of fresh, chilled and frozen groundfish at a cost of over £157 m. Compared with five years ago this is double in quantity and nearly quadruple in value. Compared with 1978, it represents increases in weight and value of 21 and 25 per cent, respectively.

I FROZEN IMPORTS

In both 1978 and 1979 frozen groundfish products accounted for a little over half by weight and two-thirds by value of the total imports of fresh, chilled and frozen groundfish. Of the total frozen imports in 1979, fillets represented 75 per cent and, at over 78,000 tonnes were 22 per cent higher than those in the preceding year.

(i) Industrial blocks of fillets

Industrial blocks are laminated blocks of skinless fillets which are generally 16½ lb. or 13½ lb. in weight.

The increase in imports of total frozen fillets was largely attributable to a 43 per cent increment in the imports of industrial (laminated) blocks of cod fillets which in 1979 accounted for about one-third of total frozen fillets. As shown in Table 4 there were substantial rises in imports from West Germany, Denmark, France and especially Iceland.

The average price of these cod blocks in 1979, at £1,088 per tonne, was 5 per cent down on that in the previous year, which could be due to a greater component of 'pin-bone in' blocks in 1979. A decline of 13 per cent in imports from Norway - the main supplier of these cod blocks - meant her market share was cut from 67 per cent to 40 per cent.

Fillets /

Fillets of haddock in industrial blocks were imported in greater quantity during 1979 than in 1978. About 1,000 tonnes or 55 per cent more were purchased and overall these blocks were fractionally dearer. Most of the increase is attributable to larger quantities purchased from the chief supplier - Norway.

(ii) Individual Fillets

This classification is understood to be mostly interleaved blocks of fillets i.e. 'shatter packs' usually sold in multiples of 1 stone. Also included are I.Q.F. (individual quick frozen) fillets some of which would be coated by U.K. processors and some of which would be bought by the retail and catering sectors.

Table 5 indicates that the most significant frozen import into the United Kingdom in 1979 by weight and value was individual cod fillets with skin which when compared with 1978 was 16 per cent higher in quantity but 2 per cent lower in average price. Despite a 5 per cent drop in the Norwegian supplies of these fillets, there were increases in the quantities from all other principal sources, the most notable being 1,500 tonnes and 1,300 tonnes which related to Canada and Iceland, respectively. In 1978 and 1979 the cheapest of these fillets were Canadian which, at £706 per tonne and £770 per tonne, respectively, were only about two-thirds of the corresponding overall prices. The dearest of these fillets in both years originated in the Faroe Islands.

Imports of skinless cod fillets (individual) also increased by 16 per cent in 1979. Those from Norway were costing slightly more in 1979 and were 28 per cent lower in weight terms but this fall was offset by larger amounts bought from Iceland, West Germany and Canada, which meant a reduction in the Norwegian share from 70 per cent to 43 per cent. As in the case of skin-on, Canadian supplies of these fillets were the cheapest in both years and in 1979 they averaged £880 per tonne, a decline of 5 per cent on the average price for 1978.

Individual fillets of haddock with-skin purchased from abroad were 47 per cent greater by weight in 1979 than in 1978. Norway increased her market share to 54 per cent and her produce became the cheapest of the main suppliers in 1979.

(iii) Fillets (product-type unspecified)

There was a reduction of 24 per cent in the amount of frozen hake fillets imported into the U.K. in 1979. During 1978 and 1979, the bulk (85 per cent) of these imports came from Argentina and the average price in 1979, £520 per tonne, was a tenth lower than that in the previous year. (see Table 6)

Nearly 1,000 tonnes more frozen fillets of saithe were imported in 1979 than in 1978 despite a 5 per cent rise in average price. In 1978, Norway provided nearly all these fillets but in 1979 Iceland entered this market with about 290 tonnes (about 10 per cent of the total) which were on average £707 per tonne, 5 per cent dearer than Norwegian.

The market for frozen plaice fillets in the U.K. is roughly shared between the Netherlands and Denmark. The quantities from both countries decreased in 1979 to produce a 7 per cent decline overall and there were rises in average price of 3 and 13 per cent in Dutch and Danish fillets, respectively.

(iv) Whole, headless or in pieces

In 1978 and 1979 about 25,000 tonnes of groundfish was imported into the United Kingdom, 'whole, headless or in pieces' of which 37 per cent was cod. Table 7 shows that increases in exports of both whole or headless cod and cod in pieces in 1979 allowed Denmark to replace Norway as the main source of these cod products. Canada who, in 1978,were new-comers to this market provided almost a ninth of the total in 1979.

Haddock /

Haddock is not very significant in this category of imports and despite a rise of 130 per cent in quantity it represented less than 5 per cent of the total in 1979.

Imports of frozen hake, 'whole, headless or in pieces' were similar in quantity during 1978 and 1979, representing approximately 15 per cent of the total groundfish. In value, however, there was a decline with the average value in 1979 falling by 13 per cent to £355 per tonne. South African exports which were invariable in average price increased in quantity by some 1,000 tonnes, accounting for 60 per cent of the total. The quantity from Uruguay became significant in 1979 with an increase of 500 tonnes whilst that from Argentina fell by roughly the same amount. The dearer quantity coming from West Germany in 1979 was 85 per cent down on the corresponding quantity for 1978.

Halibut imports supplied mainly by Iceland, increased by two-thirds by weight but, owing to a greater proportion of low-priced West German produce, the average value fell by 9 per cent.

II FRESH OR CHILLED IMPORTS

Some 94,000 tonnes of fresh or chilled groundfish valued at £51 m. were imported into the U.K. during 1979. Compared with the respective figures for 1978, this represented an increase of 25 per cent by weight and 30 per cent by value as shown in Table 8.

Of the total in 1979, cod accounted for 57 per cent rising by 25 per cent to 54,000 tonnes. Collectively, the Netherlands, Iceland and Denmark supplied over 80 per cent of this cod but most of the increase was due to imports of slightly cheaper Icelandic fish which almost doubled in quantity.

Imports /

Imports of fresh or chilled haddock in 1979 rose by 93 per cent to over 10,000 tonnes. This was largely the result of Icelandic exports which virtually trebled but also substantial increases in French and Norwegian exports of 43 and 98 per cent, respectively. On average, the Icelandic fish was costing £532 per tonne, about 5 per cent cheaper than that for the previous year. The average price of Norwegian haddock in this form was 6 per cent up whilst that of French haddock was 6 per cent down on that in 1978.

Plaice imports in 1979 were, at 18,500 tonnes, 16 per cent higher than in 1978 and represented a fifth of the total fresh or chilled imports. The major supplier is the Netherlands and in 1979, Dutch exports accounted for 62 per cent by weight and by value of the total and compared with 1978 the quantity and average value rose by 8 per cent.

The increase in the average price of saithe, 21 per cent, was the largest of those noted for the major species of fresh and chilled. Iceland became the chief exporter in 1979 rising 50 per cent by weight at the expense of France whose market share was reduced from 50 per cent to 20 per cent.

CHANNELS OF DISTRIBUTION

Table 10 shows that an estimated 785,000 tonnes (landed weight equivalent) of marine fish was consumed in the United Kingdom during 1978. Of this about 20 per cent was sold in a cooked state through fish friers, 22 per cent in a fresh or smoked state through specialist fishmongers and 22 per cent in a frozen state through supermarkets, freezer centres and other retail cabinets. As shown in Figure 2 there was a continuous upward trend in the consumption of frozen fish during the period 1974-1978 despite a downward trend in overall consumption of food fish. Increases in sales through supermarkets and freezer centres over the period were 8 and 14 per cent, respectively. This is in accordance with the growth in freezer ownership in the United Kingdom evident in Table 11.

Approximately one-third of the total usage of marine fish for human consumption - 785,000 tonnes - is processed by United Kingdom producers of quick frozen white fish into catering and consumer packs (see Table 3). The remaining two-thirds is distributed mainly by wholesale fish merchants to outlets selling fresh fish, e.g. fishmongers, supermarkets, mobiles and those selling cooked fish, e.g. friers, institutions, and restaurants.

Figure 3 indicates the possible channels through which food fish could travel before being purchased.

CONSUMPTION

Since 1958, there has been a gradual decline in the apparent consumption of fish and fish products in the U.K. Over the period 1958 to 1978 the consumption fell from 10.3 to 7.3 kg. per capita per annum, a decrease of nearly 30 per cent. As Table 12 shows, this trend was temporarily reversed in 1976 when fish prices were rising at a slower rate than those of meat and poultry. Although only a decline of 1 per cent on the previous year's figure, the consumption per capita in 1978, 7.3 kg. was the lowest amount since that for 1941 - 7.0 kg. Also, the reduction between 1974 and 1978 was nearly 9 per cent.

As shown in Table 10, over 70 per cent of the estimated apparent consumption of marine fish was groundfish. In 1977 there was a sharp decline (9 per cent) in the consumption of groundfish which is thought to be the result of reduced purchases of cooked fish caused by the shortage of potatoes experienced in that year.[1] Because of the latter the apparent increase over the comparative figure in 1978 should not be regarded as significant.

In Figure 4 these data are plotted on a quarterly basis. Within years the quarterly recordings do not seem to adhere to any standard pattern except that, in all but one of the years shown, consumption in the middle two quarters is higher than that in the 1st and 4th quarters. This is generally expected because of greater supplies of fish available during the more clement months of the year.

Household consumption probably accounts for between 60 and 70 per cent of total fish consumption. Table 13 shows annual estimates /

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[1] Approximately 20% of fish consumed in the U.K. are eaten in the traditional way together with "chips" prepared from potatoes.

estimates of the quantities of fish products eaten in the home during 1974 - 1978. The consumption of fillets of white fish was estimated to be 0.91 oz. per person per week in 1978, some 31 per cent higher than that during 1974 whilst, over the same period unfilleted white fish became less popular, falling by over 50 per cent. Over the period, the consumption of cooked fish declined despite an increase in 1978 which occurred because of the potato shortage mentioned in (ii). Both frozen convenience of fish products and especially uncooked frozen white fish increased in market share over the period.

The household consumption of frozen fish and fish products as shown in Table 14 was estimated to be 87,500 tonnes (product weight) of which approximately 77,400 tonnes was groundfish. This represents about 44 per cent of the total market for frozen groundfish and groundfish products in the United Kingdom - 175,000 tonnes. Over the four year period 1976 - 1979 the quantity of groundfish consumed rose from 67,900 tonnes to 77,400 tonnes, about 14 per cent. As illustrated in Figure 5 the decline (4 per cent) in the consumption of fish fingers/sticks was offset by a 26 per cent increase in fillets, steaks and portions, from 35,200 tonnes to 44,500 tonnes. The consumption of frozen fish cakes in 1979 was, at 7,500 tonnes, some 14 per cent higher than that in 1976 but 12 per cent lower than that in 1978. Hake purchases rose by 150 per cent in 1979 and those of mackerel increased tenfold. Kippers and other frozen herring products became less popular declining by 50 per cent whilst plaice consumption increased by over 80 per cent.

In /

In Table 15 the main sources of purchase of frozen fish products are shown. Respective proportions bought from supermarkets, freezer centres and other outlets were 60,300 and 10 per cent. However, greater quantities of fish cakes, fingers and other dishes were bought from supermarkets than fillets, steaks and portions. Whereas freezer centres sold somewhat less fish cakes, fingers and other dishes over the period the sales of fillets, steaks and portions rose from 10,900 tonnes to 14,400, over 32 per cent. In 1979 fillets, steaks and portions became the larger of the two sectors representing 51 per cent of the total compared with 44 per cent in 1974.

When plotted on a quarterly basis these consumption figures appear to follow some seasonal pattern. Figure 6 shows that consumption in the 3rd quarter is somewhat lower than that in the other quarters. This is explained by the reduced number of cooked meals anticipated in the home because of summer holidays.

Overall, considering that personal disposable incomes in the U.K. in real terms (using 'food' retail price indices) decreased by 8 per cent between 1974 and 1978, the comparative decline in consumption of groundfish species - 7 per cent - is not necessarily indicative of reduced popularity, taking income elasticity of demand into account.

PRICES

In the United Kingdom fresh fish landings are usually sold by auction at the port of landing or consigned to another port or inland market for sale. Owing to the seasonality of groundfish landings, auction prices tend to fluctuate throughout the year. As illustrated in Figure 7 fresh cod (landed weight equivalent) at the auction is usually cheaper between February and July after which it invariably becomes dearer.

As with auction prices, wholesale prices react quickly to changes in supply unlike retail prices which, as seen in Figure 8, seldom aberrate. Generally, cod prices increased at a faster rate during 1975 to 1977 than in the ensuing two years. Although auction and wholesale prices had been fairly stable in 1978 and 1979, the retail prices continued rising steadily. Table 16 shows, that accordingly the auction price accounted for a lower percentage of the retail price in these two years but that the share attributable to the wholesale price appeared to be unaffected.

Average retail prices of the major three species of groundfish sold in the United Kingdom are plotted in Figure 9 against those of the main competing products. Although the gap between cod and chuck beef prices was closing towards the end of 1979, this appears to be seasonal and over the period covered cod has been on the whole the cheapest buy of the five higher priced products.

CONCLUSION

Despite a marked decline in domestic production of groundfish in the United Kingdom over the past five years the fall in apparent consumption of groundfish was small. To meet the fairly steady demand for these species, imports increased from 145,000 tonnes in 1974 to 252,000 tonnes in 1978, over 70 per cent. As a proportion of U.K. supplies of groundfish, imports represented 40 per cent in 1978 compared with 20 per cent in 1974. Imports of both fresh and frozen products increased substantially over the period. Greater quantities of frozen industrial blocks of fillets, principally of cod were brought in from abroad by processors as raw material for the production of frozen convenience products (mostly fish fingers/sticks). More imported interleaved blocks of fillets were required to satisfy catering and institutional demand.

The market for cod in the U.K. is estimated to be in excess of 300,000 tonnes landed weight equivalent approximately half the size of the market for all groundfish. Landings of redfish and flounders in the U.K. are negligible and it is understood that any imports would be minimal.

There has been an upward trend in the consumption of fresh and frozen groundfish fillets and a downward trend in the consumption of fish fingers/steaks at the consumer level.

TABLE 1: LANDINGS OF GROUNDFISH FOOD FISH BY BRITISH VESSELS IN THE U.K.

	1974	1975	1976	1977	1978	% change between 1974 and 1978
Cod	268	242	212	148	126	- 53
Haddock	126	112	127	123	82	- 35
Whiting	40	46	49	50	58	+ 45
Saithe	44	35	41	36	31	- 30
Plaice	29	28	32	36	32	+ 10
Dogfish	15	17	17	17	17	+ 13
Other	65	52	54	51	44	- 32
Total	587	532	532	461	390	- 34

Source: Ministry of Agriculture, Fisheries and Food.

TABLE 2: LANDINGS OF GROUNDFISH FOOD FISH BY BRITISH VESSELS IN THE UNITED KINGDOM

	JANUARY-SEPTEMBER						% change	
	1978			1979				
	Metric tons	£'000	£/M.T.	Metric tons	£'000	£/M.T.	weight	av. value
Cod	103,607	53,650	518	91,235	51,422	564	- 12	+ 9
Haddock	69,064	31,602	458	57,362	27,985	488	- 17	+ 7
Whiting	41,394	11,771	284	43,389	13,758	317	+ 5	+ 12
Saithe	26,484	6,993	264	16,833	5,104	303	- 36	+ 15
Plaice	25,748	12,226	475	26,024	13,421	516	+ 1	+ 9
Dogfish	12,417	2,935	236	11,311	3,132	277	- 9	+ 17
Other	33,292	18,272	549	31,800	19,686	619	- 4	+ 13
Total	312,006	137,449	441	277,954	134,508	484	- 11	+ 10

Source: M.A.F.F.

Figure 1: Production of Quick Frozen White Fish in the United Kingdom

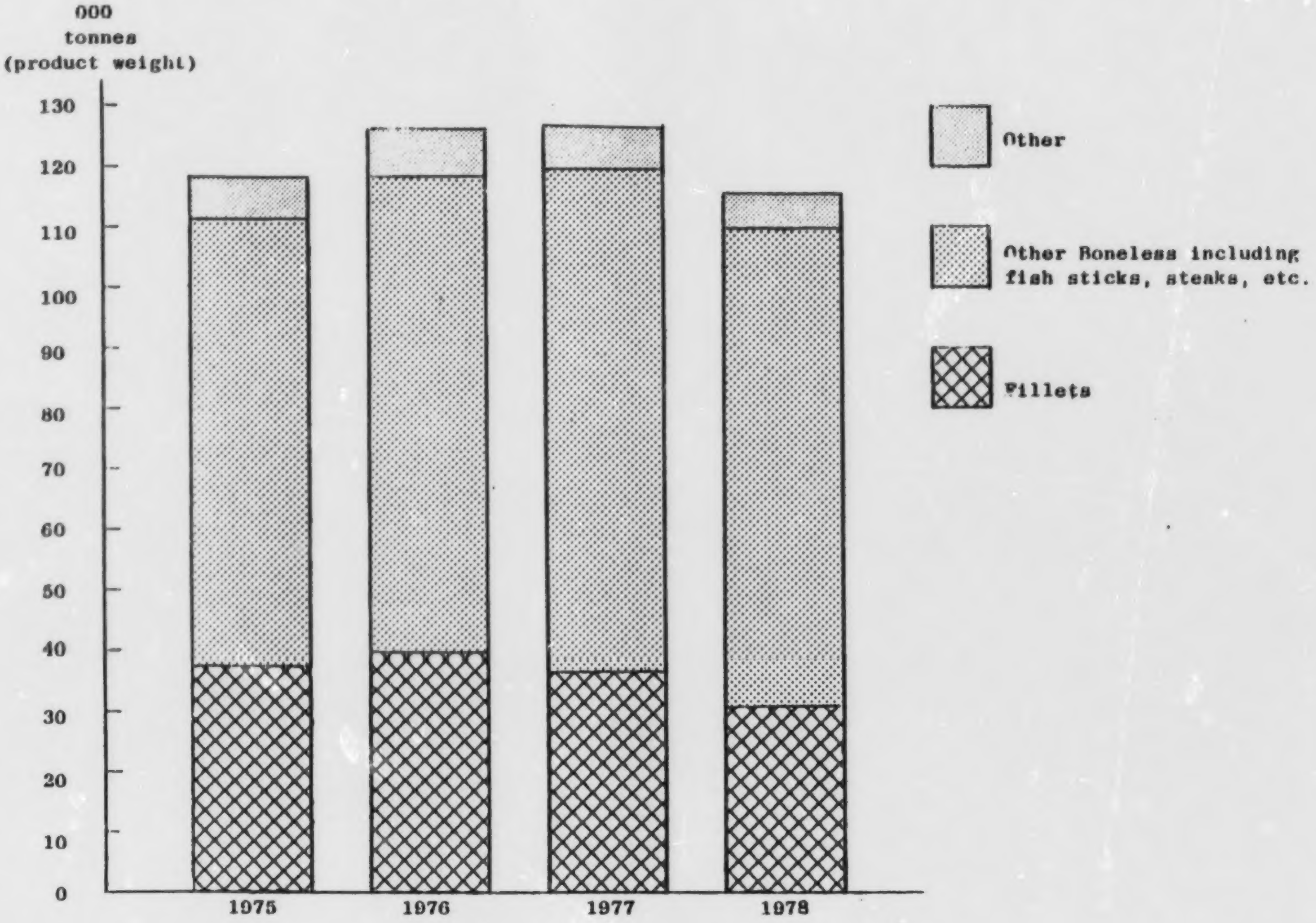


TABLE 3: PRODUCTION OF QUICK FROZEN WHITE FISH IN THE UNITED KINGDOM

	Estimated Whole Weight of Fish used in Production	% of Supplies of Human Consumption Species (a)	Quick Frozen Fish Production (b)		
			Total	Catering Packs	Consumer Packs
	Metric Tons	%	Metric Tons	Metric Tons	Metric Tons
1952	28,330	3.1	15,528	N.A.	N.A.
1953	27,341	3.3	13,215	N.A.	N.A.
1954	55,486	6.8	26,344	N.A.	N.A.
1955	68,737	7.8	32,048	N.A.	N.A.
1956	79,562	9.0	37,215	N.A.	N.A.
1957	82,384	9.6	37,713	N.A.	N.A.
1958	95,342	11.3	43,431	N.A.	N.A.
1959	99,672	12.2	43,985	N.A.	N.A.
1960	118,364	14.5	53,256	30,409	22,347
1961	129,052	16.3	57,056	30,476	26,580
1962	130,498	15.9	58,724	34,303	24,421
1963	131,064	16.0	58,991	27,884	31,107
1964	138,590	16.3	63,603	30,535	33,068
1965	161,505	17.6	73,717	34,681	39,036
1966	183,945	20.6	79,264	32,486	46,778
1967	192,123	21.2	83,987	39,900	44,087
1968	195,749	20.7	89,518	42,510	47,008
1969	209,723	22.8	99,069	45,062	54,007
1970	242,871	26.6	109,045	48,471	60,574
1971	223,419	25.3	102,354	48,679	53,675
1972	245,724	29.0	111,605	53,069	58,536
1973	257,352	29.2	121,007	54,124	66,883
1974	243,476	29.0	114,733	50,606	64,127
1975	250,253	31.5	118,238	51,833	66,405
1976	266,780	30.3	126,179	53,980	72,199
1977	270,967	29.1	128,667	57,832	70,835
1978	245,551	22.6	116,067	50,880	65,187

(a) This proportion is expressed in terms of total "edible" (excluding Norway pout and sandeels) landings including an estimate of the landed weight equivalent of imports of fillets and other boneless fish. Before 1967 these imports were included in product weight terms.

(b) Product weight

TABLE 4: U.K. IMPORTS OF FROZEN INDUSTRIAL BLOCKS OF FILLETS

	1978			1979			% Change	
	Tonnes	£'000	£/t.	Tonnes	£'000	£/t.	Weight	Av. Value
COD	17,403	19,937	1,146	24,838	27,020	1,088	+ 43	- 5
Main sources:								
Norway	11,465	13,304	1,160	9,994	11,221	1,123	- 13	- 3
Denmark	1,458	1,716	1,177	3,698	4,212	1,140	+ 154	- 3
W. Germany	2,285	2,499	1,094	4,809	4,974	1,034	+ 110	- 5
Iceland	884	884	1,000	3,255	3,311	1,017	+ 268	+ 2
Faroe Islands	1,045	1,246	1,192	1,146	1,509	1,317	+ 10	+ 10
France	199	230	1,156	1,433	1,382	964	+ 620	- 17
HADDOCK	1,801	2,130	1,183	2,792	3,339	1,196	+ 55	+ 1
Main sources:								
Norway	1,424	1,717	1,206	2,195	2,630	1,198	+ 54	- 1
Faroe Islands	306	334	1,092	238	278	1,168	- 22	+ 7
Iceland	14	17	1,214	342	411	1,202	+>1000	- 1

TABLE 5: U.K. IMPORTS OF FROZEN INDIVIDUAL FILLETS

	1978			1979			% Change	
	Tonnes	£'000	£/t.	Tonnes	£'000	£/t.	Weight	Av. Value
COD With skin	22,956	26,129	1,138	26,635	30,546	1,147	+ 16	+ 1
Main sources:								
Norway	15,866	18,424	1,161	15,094	17,972	1,191	- 5	+ 3
Iceland	5,961	6,486	1,088	7,416	8,263	1,114	+ 24	+ 2
Denmark	559	570	1,020	1,401	1,582	1,129	+ 151	+ 11
Canada	51	36	706	1,359	1,047	770	+>1000	+ 9
Faroe Islands	407	494	1,214	876	1,105	1,261	+ 115	+ 4
COD Skinless	5,511	6,934	1,258	6,395	7,866	1,230	+ 16	- 2
Main sources:								
Norway	3,838	4,880	1,271	2,748	3,629	1,321	- 28	+ 4
Iceland	899	1,125	1,251	1,328	1,685	1,269	+ 48	+ 1
W. Germany	477	562	1,178	1,148	1,351	1,177	+ 141	*
Canada	39	36	923	585	515	880	+>1000	- 5
HADDOCK With skin	4,559	5,202	1,141	6,720	8,306	1,236	+ 47	+ 8
Main sources:								
Norway	2,110	2,389	1,132	3,605	4,365	1,211	+ 71	+ 7
Iceland	2,051	2,330	1,136	2,267	2,832	1,249	+ 11	+ 10
Faroe Islands	367	441	1,202	706	916	1,297	+ 92	+ 8
HADDOCK Skinless	402	463	1,152	809	927	1,146	+ 101	- 1
Main sources:								
Norway	354	408	1,153	621	707	1,138	+ 75	- 1
Iceland	30	37	1,233	154	175	1,136	+ 413	- 8

* Less than half last digit used

TABLE 6: U.K. IMPORTS OF FROZEN FILLETS

	1978			1979			% Change	
	Tonnes	£'000	£/M.T.	Tonnes	£'000	£/M.T.	Weight	Av. Value
HAKE	3,570	2,126	596	2,730	1,442	528	- 24	- 11
Main source:								
Argentina	3,013	1,743	578	2,320	1,206	520	- 23	- 10
SAITHE	1,866	1,201	643	2,829	1,913	676	+ 52	+ 5
Main source:								
Norway	1,835	1,178	642	2,343	1,575	672	+ 28	+ 5
Iceland	-	-	-	294	208	707	N.A.	N.A.
PLAICE	1,275	1,719	1,348	1,188	1,733	1,459	- 7	+ 8
Main sources:								
Netherlands	555	703	1,267	519	746	1,437	- 6	+ 13
Denmark	542	820	1,513	491	767	1,562	- 9	+ 3

TABLE 7: U.K. IMPORTS OF FROZEN WHOLE, HEADLESS, OR IN PIECES

	1978			1979			% Change	
	Tonnes	£'000	£/t.	Tonnes	£'000	£/t.	Weight	Av. Value
COD Whole or headless	1,716	908	529	3,338	1,884	564	+ 95	+ 7
Main sources:								
Norway	256	143	559	964	532	552	+ 277	- 1
Iceland	164	77	470	686	357	520	+ 318	+ 11
Spain	800	351	439	387	180	465	- 52	+ 6
Poland	-	-	-	349	112	321	N.A.	N.A.
Denmark	59	67	1,136	259	259	1,000	+ 339	- 12
Canada	-	-	-	251	179	713	N.A.	N.A.
Netherlands	231	112	485	123	84	683	- 47	+ 41
COD Pieces	7,215	3,763	522	5,983	3,913	654	- 17	+ 25
Main sources:								
Denmark	1,899	1,040	548	2,181	1,569	719	+ 15	+ 31
Norway	2,575	1,233	479	1,410	758	538	- 45	+ 12
Canada	73	34	466	786	493	627	+>1000	+ 35
W. Germany	451	270	599	667	541	811	+ 48	+ 35
Soviet Union	1,000	376	376	-	-	-	N.A.	N.A.
Faroe Isles	312	162	519	398	238	598	+ 28	+ 15
HADDOCK Whole or headless	370	183	495	852	557	655	+ 130	+ 32
Main sources:								
Norway	223	128	574	629	398	633	+ 182	+ 10
Iceland	68	29	427	143	80	560	+ 110	+ 31
HADDOCK Pieces	421	209	497	385	195	507	- 9	+ 2
Main Sources:								
Norway	183	88	481	246	126	512	+ 34	+ 6
Iceland	93	36	387	102	36	353	+ 10	- 9
France	56	31	554	-	-	-	N.A.	N.A.

TABLE 7 (Cont'd): U.K. IMPORTS OF FROZEN WHOLE, HEADLESS OR IN PIECES

	1978			1979			% Change	
	Tonnes	£'000	£/M.T.	Tonnes	£'000	£/M.T.	Weight	Av. Value
HALIBUT	1,319	1,114	845	2,193	1,692	772	+ 66	- 9
Main sources:								
Iceland	860	517	601	1,347	832	618	+ 57	+ 3
W. Germany	34	15	441	281	129	459	+ 726	+ 4
HAKE	3,700	1,501	406	3,874	1,377	355	+ 5	- 13
Main sources:								
South Africa	1,270	389	306	2,313	709	306	+ 82	=
Argentina	1,262	679	538	797	391	491	- 37	- 9
Uruguay	25	10	400	548	185	338	+>1000	- 16
West Germany	429	195	455	65	32	492	- 85	+ 8

TABLE 8: U.K. IMPORTS OF FRESH OR CHILLED FISH

	1978			1979			% Change	
	Tonnes	£'000	£/M.T.	Tonnes	£'000	£/M.T.	Weight	Av. Value
COD	42,757	20,365	476	53,471	27,142	508	+ 25	+ 7
Main sources:								
Netherlands	18,021	8,483	471	18,779	9,519	507	+ 4	+ 8
Iceland	7,720	3,630	470	14,795	6,888	466	+ 92	- 1
Denmark	7,254	3,672	506	10,448	5,846	560	+ 44	+ 11
Belgium/Luxembourg	3,976	1,862	468	3,610	1,939	537	- 9	+ 15
Irish Republic	1,424	703	494	2,161	1,225	567	+ 52	+ 15
Fed. Rep. Germany	2,712	1,179	435	1,690	722	427	- 38	- 2
Faroe Islands	499	237	475	509	252	495	+ 2	+ 4
Norway	373	217	582	490	325	663	+ 31	+ 14
HADDOCK	5,349	2,788	521	10,329	5,532	536	+ 93	+ 3
Main sources:								
Iceland	1,765	992	562	5,250	2,793	532	+197	- 5
France	1,101	509	462	1,578	682	432	+ 43	- 7
Norway	772	471	610	1,528	984	644	+ 98	+ 6
Denmark	800	377	471	729	370	508	- 9	+ 8
Belgium/Luxembourg	410	208	507	635	372	586	+ 55	+ 16
Faroe Islands	281	143	509	394	194	492	+ 40	- 3
PLAICE	15,961	8,626	540	18,476	10,471	567	+ 16	+ 5
Main sources:								
Netherlands	10,690	5,602	524	11,525	6,535	567	+ 8	+ 8
Denmark	2,176	1,292	594	3,282	1,968	600	+ 51	+ 1
Belgium/Luxembourg	2,171	1,235	569	2,274	1,243	547	+ 5	- 4
Iceland	682	358	525	877	437	498	+ 29	- 5
SAITHE	2,908	746	257	2,642	822	311	- 9	+ 21
Main sources:								
Iceland	1,123	267	238	1,686	491	291	+ 50	+ 22
France	1,511	384	254	513	148	288	- 66	+ 13

UNITED KINGDOM

TABLE 9: IMPORTS OF FISHERY PRODUCTS FOR HUMAN CONSUMPTION

	JANUARY-DECEMBER						% change	
	1978			1979				
	tonnes	£'000	£/M.T.	tonnes	£'000	£/M.T.	weight	av. value
Fresh, Chilled or Frozen(exc.Fillets)								
Cod	51,687	25,036	484	62,792	32,939	525	+ 21	+ 8
Haddock	6,140	3,180	518	11,566	6,284	543	+ 88	+ 5
Sardines	339	119	351	2,236	245	110	+560	- 69
Saithe	3,684	979	266	3,257	1,027	315	- 12	+ 18
Plaice	16,928	9,068	536	19,394	10,993	567	+ 15	+ 6
Hake	3,822	1,614	422	3,917	1,427	364	+ 2	- 14
Halibut	1,474	1,260	855	2,813	2,101	747	+ 91	- 13
Herring	9,050	4,009	443	11,320	4,777	422	+ 25	- 5
Salmon	4,770	11,487	2,408	5,148	14,842	2,883	+ 8	+ 20
Other*	19,184	13,094	683	21,626	13,882	642	+ 13	- 6
Total	117,078	69,846	597	144,069	88,517	614	+ 23	+ 3
Fresh, Chilled or Frozen Fillets								
Cod	47,053	54,312	1,154	59,321	67,079	1,132	+ 26	- 2
Haddock	6,856	7,937	1,158	10,360	12,624	1,219	+ 51	+ 5
Plaice	1,275	1,719	1,348	1,188	1,733	1,459	- 7	+ 8
Saithe	1,867	1,201	643	2,829	1,913	676	+ 52	+ 5
Hake	3,570	2,126	596	2,731	1,441	528	- 24	- 11
Coated with batter and/or breadcrumbs	1,844	3,058	1,658	1,741	2,838	1,630	- 6	- 2
Other*	4,864	3,655	751	3,056	2,800	916	- 37	+ 22
Total	67,329	74,008	1,099	81,226	90,428	1,113	+ 21	+ 1
Dried, Salted or Smoked								
Herring	2,047	1,051	513	1,571	754	480	- 23	- 6
Other*	2,115	1,875	887	2,607	2,417	927	+ 23	+ 5
Total	4,162	2,926	703	4,178	3,171	759	ø	+ 8
Shellfish								
Prawns	7,743	7,366	951	6,857	8,701	1,269	- 11	+ 33
Shrimps & prawns	3,362	7,885	2,345	4,895	13,044	2,665	+ 46	+ 14
Mussels	1,226	470	383	1,230	837	680	ø	+ 78
Other*	3,191	5,250	1,645	4,039	6,565	1,625	+ 27	- 1
Total	15,522	20,971	1,351	17,021	29,147	1,712	+ 10	+ 27
Fish Preparations								
Salmon	13,973	30,569	2,188	15,127	34,339	2,270	+ 8	+ 4
Sardines	7,480	7,054	943	7,595	8,123	1,070	+ 2	+ 13
Tunny	6,347	9,996	1,460	9,682	14,429	1,490	+ 41	+ 2
Pilchards	5,443	3,044	559	11,163	6,104	547	+105	- 2
Mackerel	1,254	997	795	1,395	1,295	928	+ 11	+ 17
Other*	7,029	9,244	1,315	9,996	13,522	1,353	+ 42	+ 3
Total	42,026	60,904	1,449	54,958	77,812	1,416	+ 31	- 2
Shellfish Preparations	12,511	29,181	2,332	12,278	32,137	2,617	- 2	+ 12
TOTAL	258,628	257,836	997	313,730	321,212	1,024	+ 21	+ 3

* Includes unspecified

ø Less than 0.5 per cent

Source: H.M. Customs and Excise Statistics

TABLE 10: ESTIMATES OF APPARENT* U.K. HUMAN CONSUMPTION OF MARINE FISH BY RETAIL OUTLET

'000 METRIC TONS (LANDED WEIGHT EQUIVALENT)

	1974	1975	1976	1977	1978
Fish Mongers[ø]	170	161	172	170	171
Fish Friers	170	190	181	151	159
Supermarkets**	116	127	93	96	100
Freezer Centres**			44	46	50
Other Retail Cabinets**			19	20	21
Other Outlets[øø]	399	374	350	324	284
TOTAL	855	852	859	807	785
Demersal	643	616	606	552	598
Demersal as % of TOTAL	75	72	71	68	76

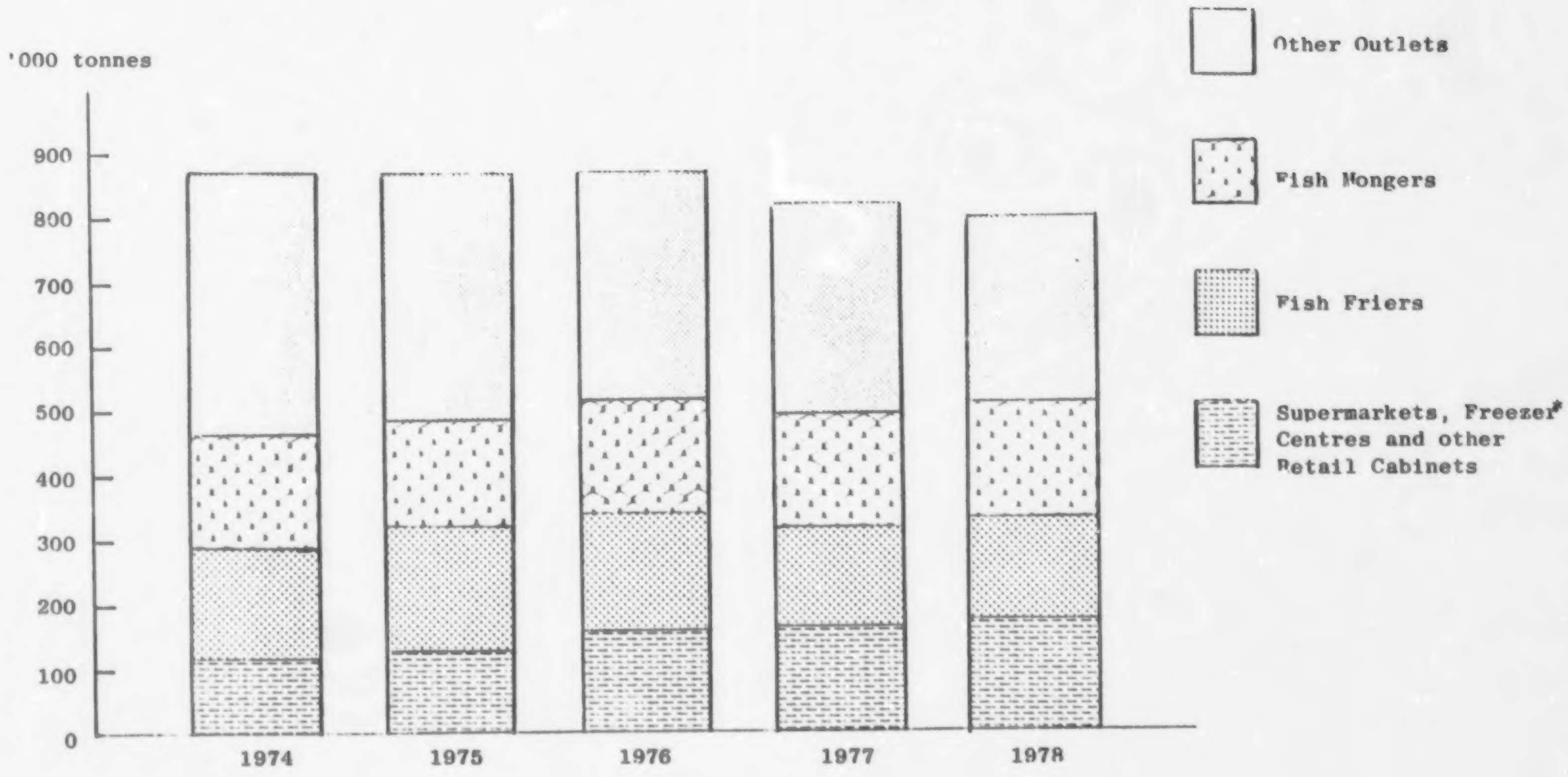
* Landings bought for U.K. human consumption plus imports intended for human consumption minus exports intended for human consumption plus or minus the net change in stock of quick frozen white fish.

ø Excludes shellfish. Specialist mongers only (exc. grocer monger & supermarkets)

** Frozen fish only.

øø Includes schools, prisons, staff canteens, restaurants, snack bars, grocer mongers, mobiles, meals on wheels and others.

Figure 2: Estimates of Apparent U.K. Human Consumption of Marine Fish



* Frozen fish only

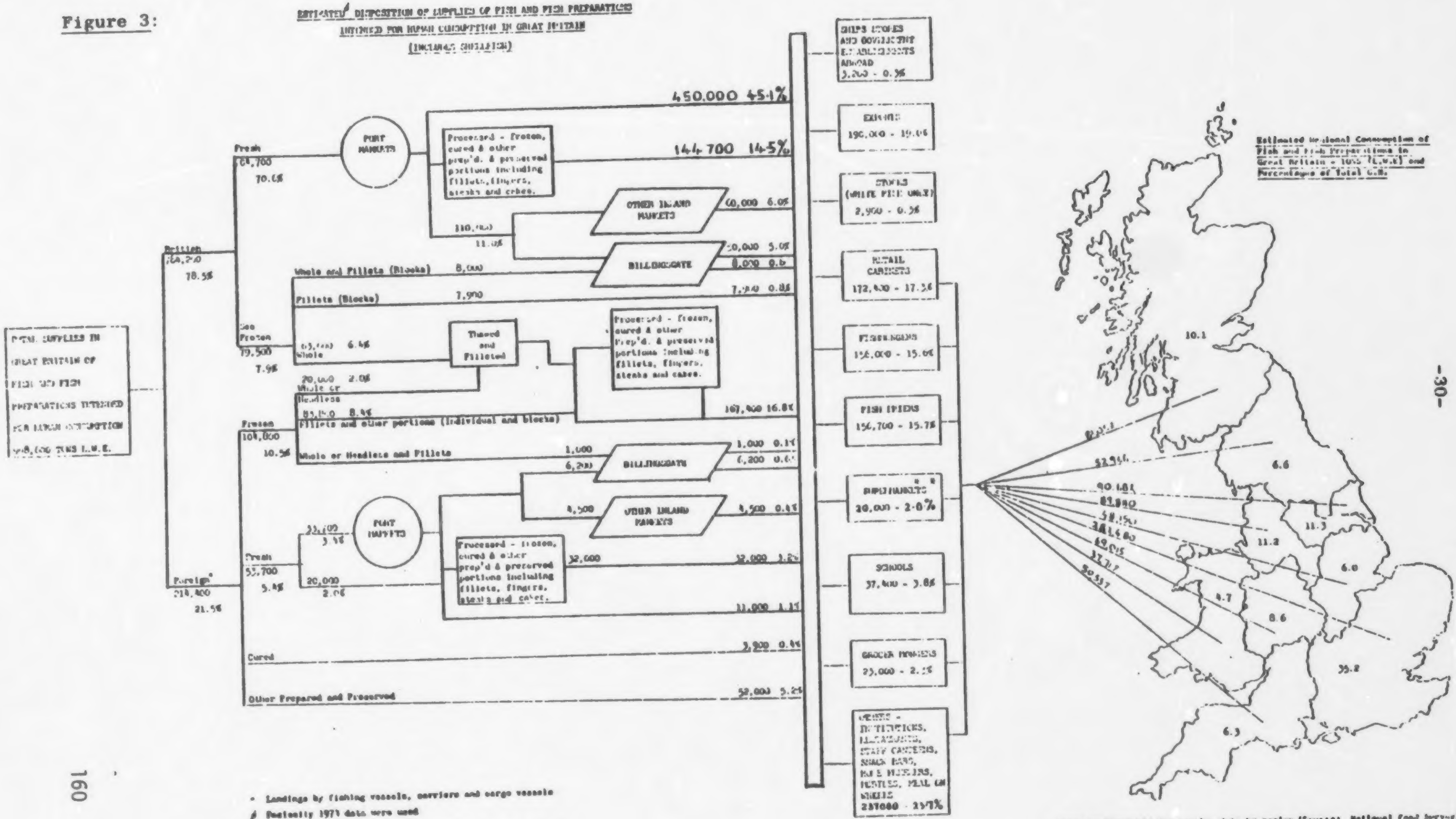
TABLE 11: U.K. SALES ('000s) OF HOME FREEZERS AND HOUSEHOLD OWNERSHIP IN 1973-1978

	Freezers	Fridge/ Freezers	Total	% Households Owning
1973	812	150	962	13.6
1974	714	294	1,008	19.3
1975	851	393	1,224	26.0
1976	832	428	1,260	32.2
1977	755	574	1,329	37.0
1978	564	593	1,157	40.5

Source: Eurofood

Figure 3:

ESTIMATED∮ DISPOSITION OF SUPPLIES OF FISH AND FISH PREPARATIONS
INTENDED FOR HUMAN CONSUMPTION IN GREAT BRITAIN
(INCLUDES SHELLFISH)


TOTAL SUPPLIES IN GREAT BRITAIN OF FISH AND FISH PREPARATIONS INTENDED FOR HUMAN CONSUMPTION 998,600 TONS L.W.E.
British 784,200 78.5%
Foreign* 214,400 21.5%
Fresh 684,700 70.6%
PORT MARKETS
Processed - frozen, cured & other prep'd. & preserved portions including fillets, fingers, steaks and cakes.
450,000 45.1%
144 700 14.5%
110,000 11.0%
OTHER INLAND MARKETS
60,000 6.0%
BILLINGSGATE
50,000 5.0%
6,000 0.6
Sea Frozen 79,500 7.9%
Whole and Fillets (Blocks) 8,000
Fillets (Blocks) 7,900
7,900 0.8%
63,600 6.4% Whole
Thawed and Filleted
Processed - frozen, cured & other prep'd. & preserved portions including fillets, fingers, steaks and cakes.
167,900 16.8%
20,000 2.0% Whole or Headless
Frozen 104,800 10.5%
83,800 8.4% Fillets and other portions (Individual and blocks)
Whole or Headless and Fillets
1,000
6,200
BILLINGSGATE
1,000 0.1%
6,200 0.6%
4,500
OTHER INLAND MARKETS
4,500 0.4%
Fresh 53,700 5.4%
33,700 3.4%
PORT MARKETS
20,000 2.0%
Processed - frozen, cured & other prep'd & preserved portions including fillets, fingers, steaks and cakes.
32,000
32,000 3.2%
11,000 1.1%
Cured
3,900 0.4%
Other Prepared and Preserved
52,000 5.2%
SHIPS STORES AND GOVERNMENT ESTABLISHMENTS ABROAD 3,200 - 0.3%
EXPORTS 190,000 - 19.0%
STOCKS (WHITE FISH ONLY) 2,900 - 0.3%
RETAIL CABINETS 172,600 - 17.3%
FISHMONGERS 156,000 - 15.6%
FISH FRIERS 156,700 - 15.7%
SUPERMARKETS** 20,000 - 2.0%
SCHOOLS 37,400 - 3.8%
GROCER FREEZERS 25,000 - 2.5%
OTHERS - INSTITUTIONS, RESTAURANTS, STAFF CANTEENS, SNACK BARS, PIE & PASTIES, HOSTELS, MEAL ON WHEELS 237000 - 23.7%
Estimated Regional Consumption of Fish and Fish Preparations in Great Britain - 1975 (L.W.E) and Percentages of Total G.B.
82,541
52,944
90,181
83,890
58,156
34,640
49,015
37,717
50,557
10.1
6.6
11.3
11.2
6.0
4.7
8.6
35.2
6.3

Based on Household Consumption data by region.(Source: National Food Survey)

* Landings by fishing vessels, carriers and cargo vessels

∮ Basically 1973 data were used

** Selling fresh and unbranded frozen fish

L.W.E. Landed Weight Equivalent

TABLE 12: FISH SUPPLIES MOVING INTO HUMAN CONSUMPTION
(Kg per head of population per annum)

UNITED KINGDOM

Fish	Pre-war	1948	1960	1970	1973	1974	1975	1976	1977	1978
Fresh, frozen and cured (wet fillet equivalent)	9.9	13.0	7.3	7.3	6.2	6.4	6.1	6.5	5.7	5.8
Herring	-	-	0.6	0.6	0.6	0.6	0.4	0.4	0.1	0.1
Other	-	-	6.7	6.7	5.6	5.8	5.7	6.1	5.6	5.7
Shellfish (edible weight)	0.4	0.3	0.3	0.5	0.7	0.6	0.6	0.7	0.5	0.5
Canned Fish (imported)	1.6	0.8	1.2	1.0	1.3	1.0	1.2	1.2	1.2	1.0
Total (edible weight)	11.9	14.1	8.8	8.8	8.2	8.0	7.9	8.4	7.4	7.3

Notes: (i) These statistics are based on total supplies moving into consumption and as such measure disappearance rather than final consumption, since it is not practicable to measure changes in wholesale and retail stock levels.

(ii) The figures include consumption not only in private households but also in institutions and catering establishments, and by H.M. Forces in the United Kingdom. Comprehensive tables of food consumption levels in the United Kingdom are published annually in the Trade and Industry Journal and in the Annual Abstract of Statistics.

(iii) More detailed estimates of the consumption of fish and other foods in private households are published in the annual reports of the National Food Survey Committee.

N.B. The series for "Fresh, frozen and cured" fish has been revised as from 1960 and broken down into "Herring" and "Other"; it is not strictly comparable with the series for earlier years.

- 1975 and 1976 totals have been revised.

Figure 4: Apparent Consumption of Demersal Food Fish in the U.K.

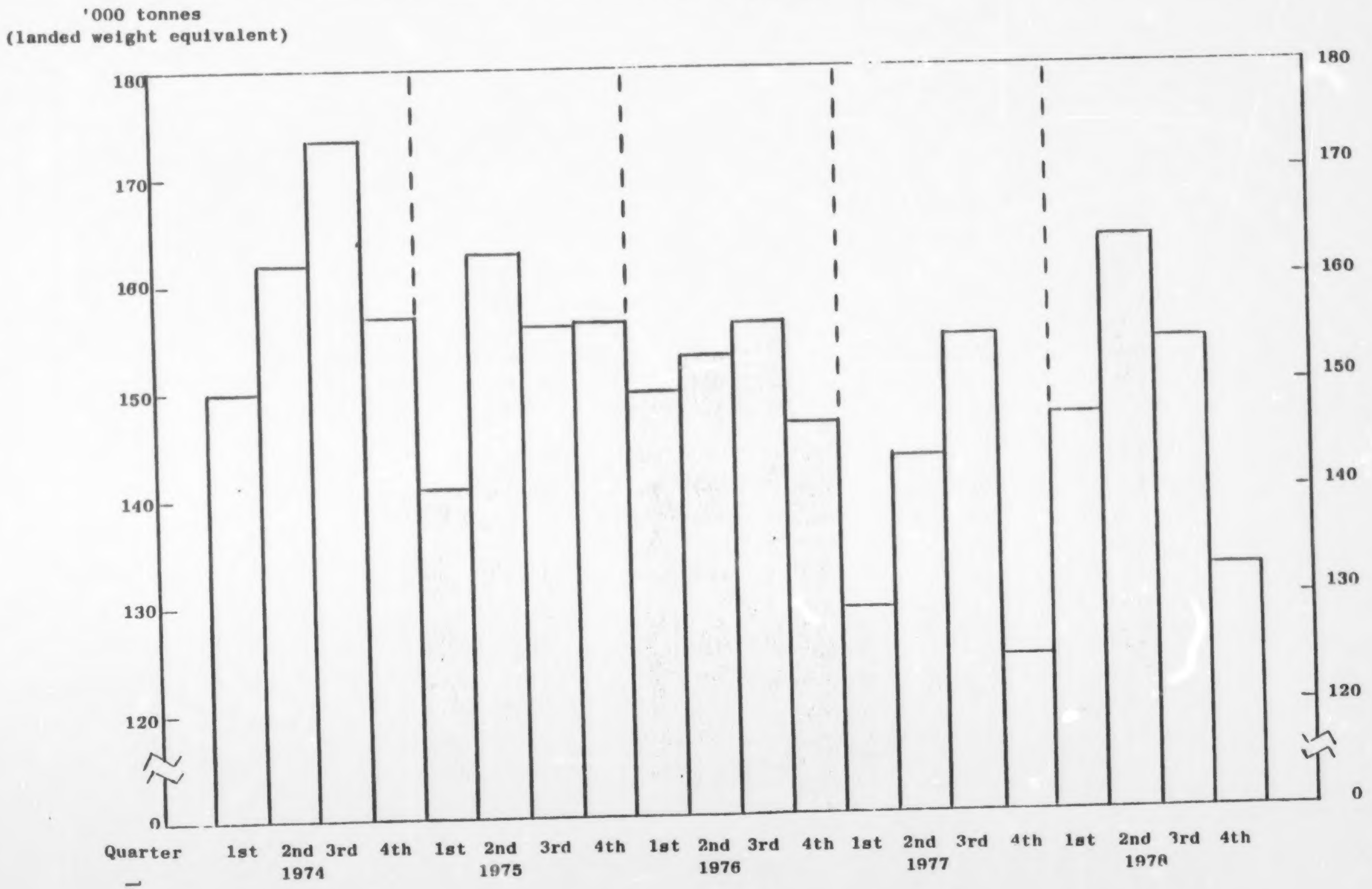


TABLE 13: ESTIMATED HOUSEHOLD CONSUMPTION OF FISH PRODUCTS IN THE U.K.

oz. per person per week

	1974	1975	1976	1977	1978
White, filleted, fresh	0.69	0.68	0.78	0.79	0.91
White, unfilleted, fresh	0.58	0.62	0.44	0.38	0.27
White, uncooked, frozen	0.28	0.38	0.48	0.40	0.45
Herring, filleted fresh	0.01	0.01	0.01	0.01	0.01
Herrings, unfilleted fresh	0.07	0.05	0.05	0.04	0.03
Fat fresh, other than herrings	0.09	0.13	0.11	0.14	0.13
White processed	0.20	0.22	0.21	0.19	0.19
Fat, processed, filleted	0.09	0.08	0.12	0.11	0.11
Fat, processed, unfilleted	0.12	0.09	0.08	0.07	0.06
Shellfish	0.06	0.09	0.08	0.07	0.09
Cooked fish	0.74	0.66	0.66	0.50	0.64
Canned salmon	0.19	0.27	0.17	0.14	0.16
Other canned or bottled fish	0.42	0.40	0.48	0.42	0.35
Fish products, not frozen	0.12	0.14	0.14	0.11	0.14
Frozen convenience fish products	0.68	0.67	0.78	0.80	0.73
	4.33	4.46	4.58	4.13	4.25

Source: Attwood Statistics (Great Britain)
Limited.

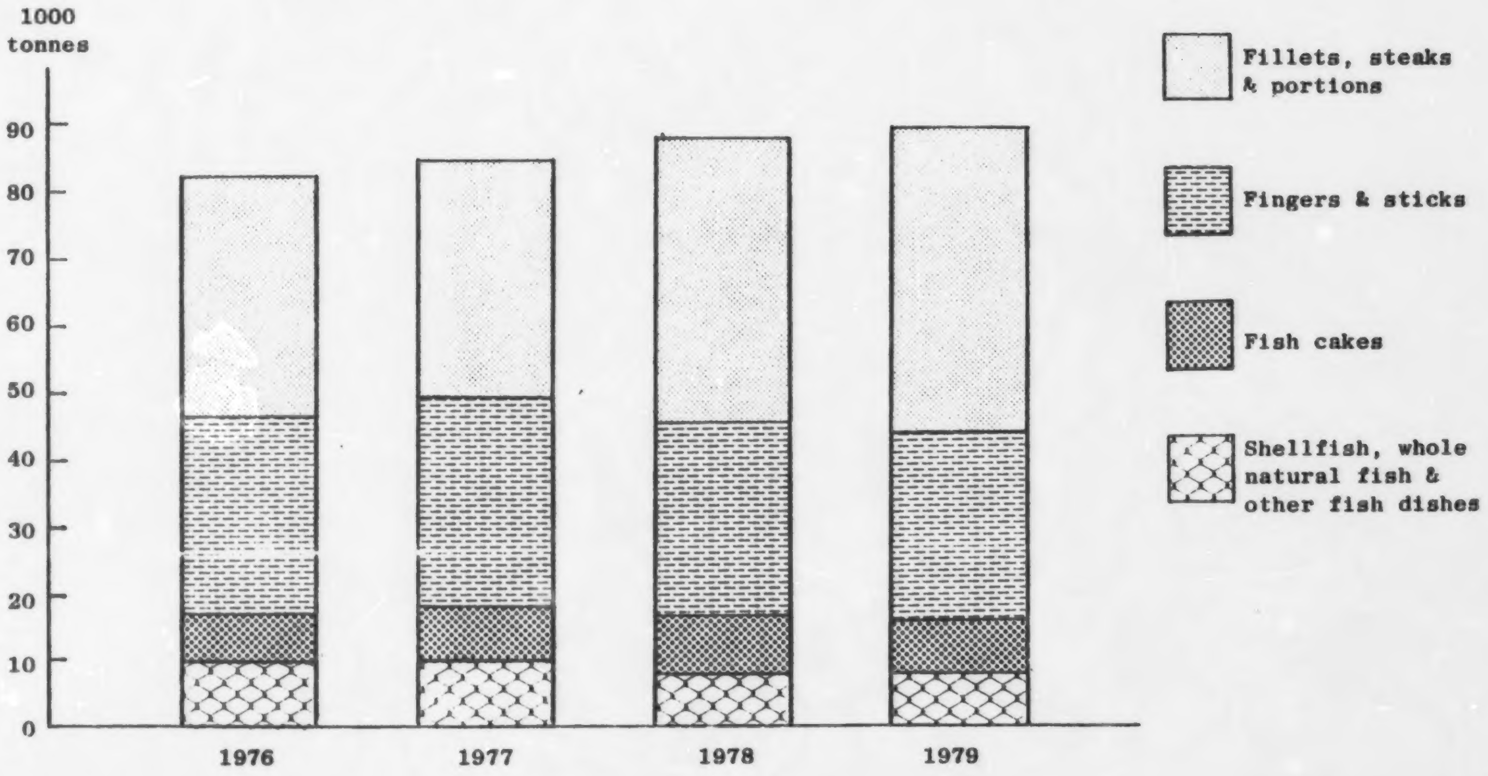
TABLE 14: ESTIMATED HOUSEHOLD CONSUMPTION OF FROZEN FISH PRODUCTS IN THE U.K.

'000 tonnes

Product	1976	1977	1978	1979
FILLETS/STEAKS & PORTIONS	35.2	34.6	41.3	44.5
Cod	18.7	17.3	20.3	22.5
Smoked Cod	0.2	0.2	0.2	0.3
Coley	1.6	1.9	1.9	2.2
Haddock)	7.4	7.2	(7.0	6.6
Smoked haddock)			(1.7	1.6
Hake	0.6	0.6	1.1	1.5
Herring	0.2	0.2	0.1	0.1
Kippers	2.4	2.3	1.5	1.2
Mackerel)	0.1	0.3	(0.5	0.5
Smoked mackerel)			(0.3	0.5
Plaice	2.8	3.3	5.0	5.1
Other	1.2	1.3	1.7	2.4
FINGERS/STICKS	28.8	30.6	28.3	27.7
FISH CAKES	6.6	7.7	8.5	7.5
SHELLFISH/WHOLE NATURAL FISH	9.7	9.9	7.7	7.8
TOTAL	80.3	82.8	85.8	87.5
Estimated total groundfish	67.9	70.1	75.7	77.4

Source: Attwood Statistics (Great Britain) Limited

Figure 5: Estimated Household Consumption of Frozen Fish Products in the United Kingdom



Source: Based on Attwood Statistics (Great Britain) Limited

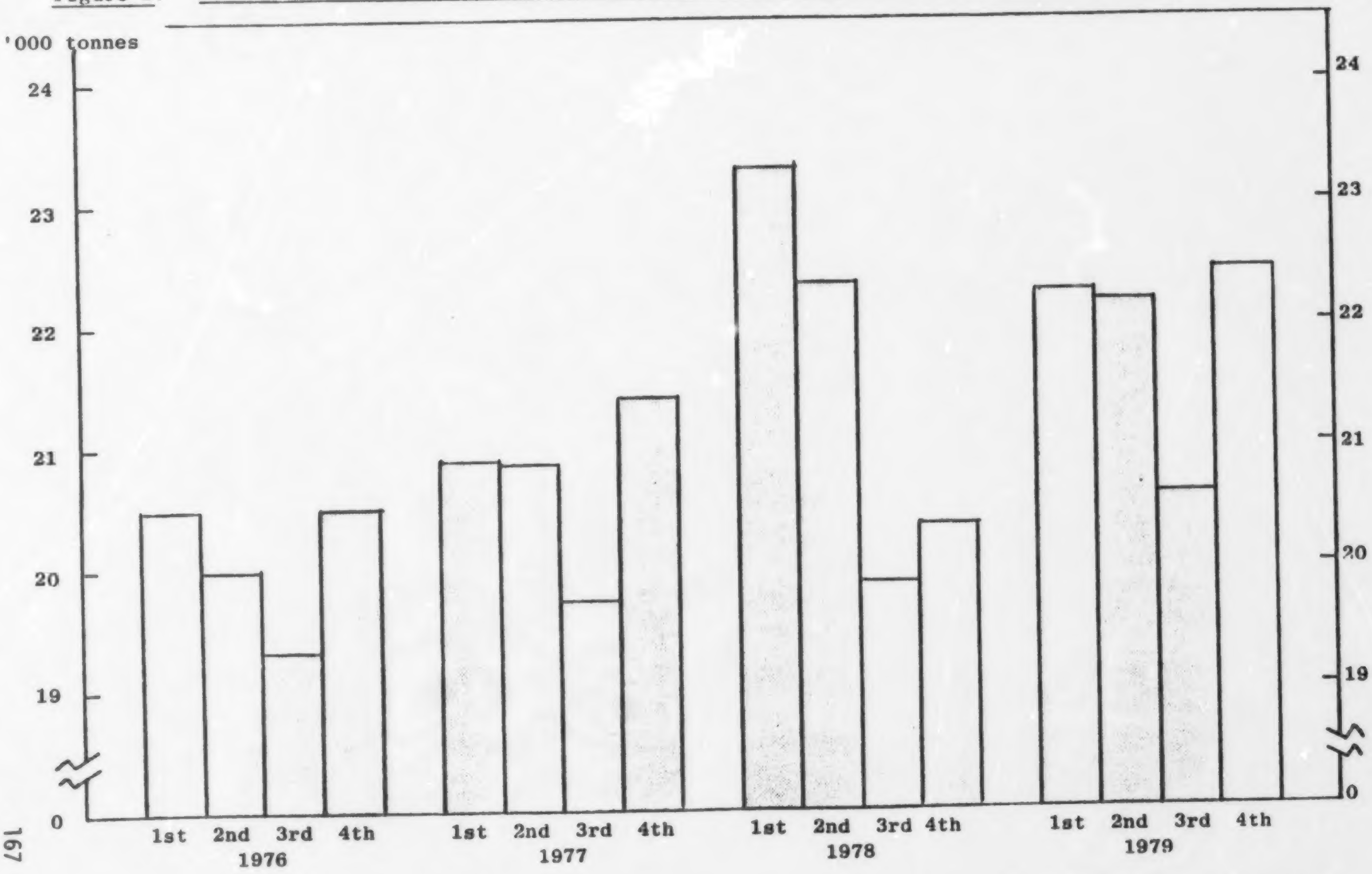
TABLE 15: SOURCE OF ESTIMATED HOUSEHOLD CONSUMPTION OF FROZEN FISH PRODUCT IN THE U.K.

'000 tonnes

	1976	1977	1978	1979
i) FILLETS, STEAKS & PORTIONS	35.2	34.6	41.3	44.5
Supermarkets	19.4	18.9	22.3	23.3
Freezer Centres	10.9	10.8	13.1	14.4
Other Retail Outlets	4.9	4.9	5.9	6.8
ii) FISH CAKES, FINGERS & OTHERS	45.1	48.2	44.5	43.0
Supermarkets	27.4	29.4	27.3	27.2
Freezer Centres	12.3	13.1	12.1	11.0
Other Retail Outlets	5.4	5.7	5.1	4.8
TOTAL (i) + (ii)	80.3	82 8	85.8	87.5
Supermarkets	46.8	48.3	49.6	50.5
Freezer Centres	23.2	23.9	25.2	25.4
Other Retail Outlets	10.3	10.6	11.0	11.6

Source: Attwood Statistics (Great Britain) Limited

Figure 6: Estimated Household Consumption of Frozen Fish Products in the United Kingdom



Source: Based on Attwood Statistics (Great Britain) Limited

FIGURE 7: AVERAGE AUCTION PRICES OF CODSTUFFS AT MAJOR PORTS IN ENGLAND AND WALES

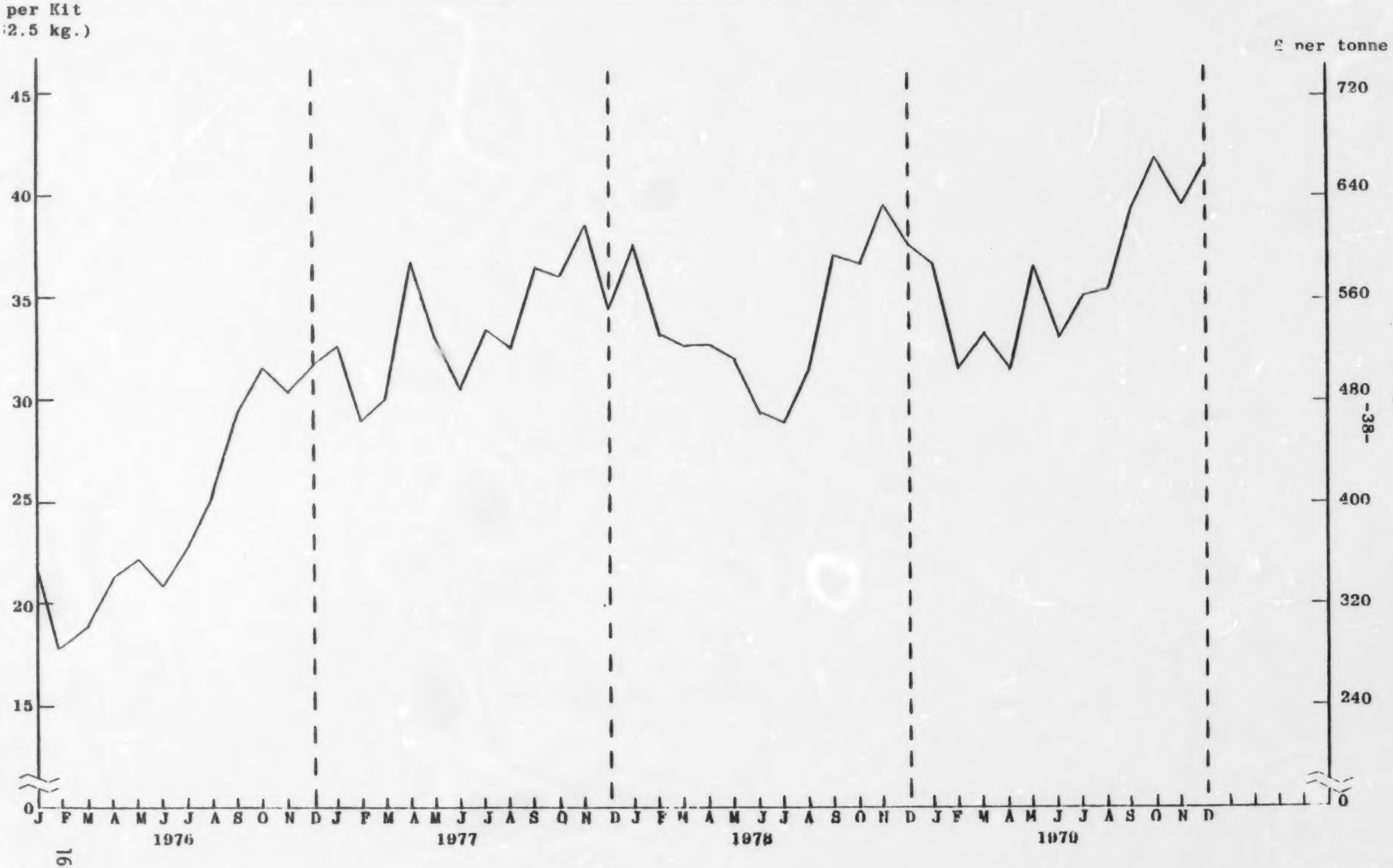


Figure 8: Average Auction, Wholesale and Retail Prices of Fresh Cod Fillets in the U.K.

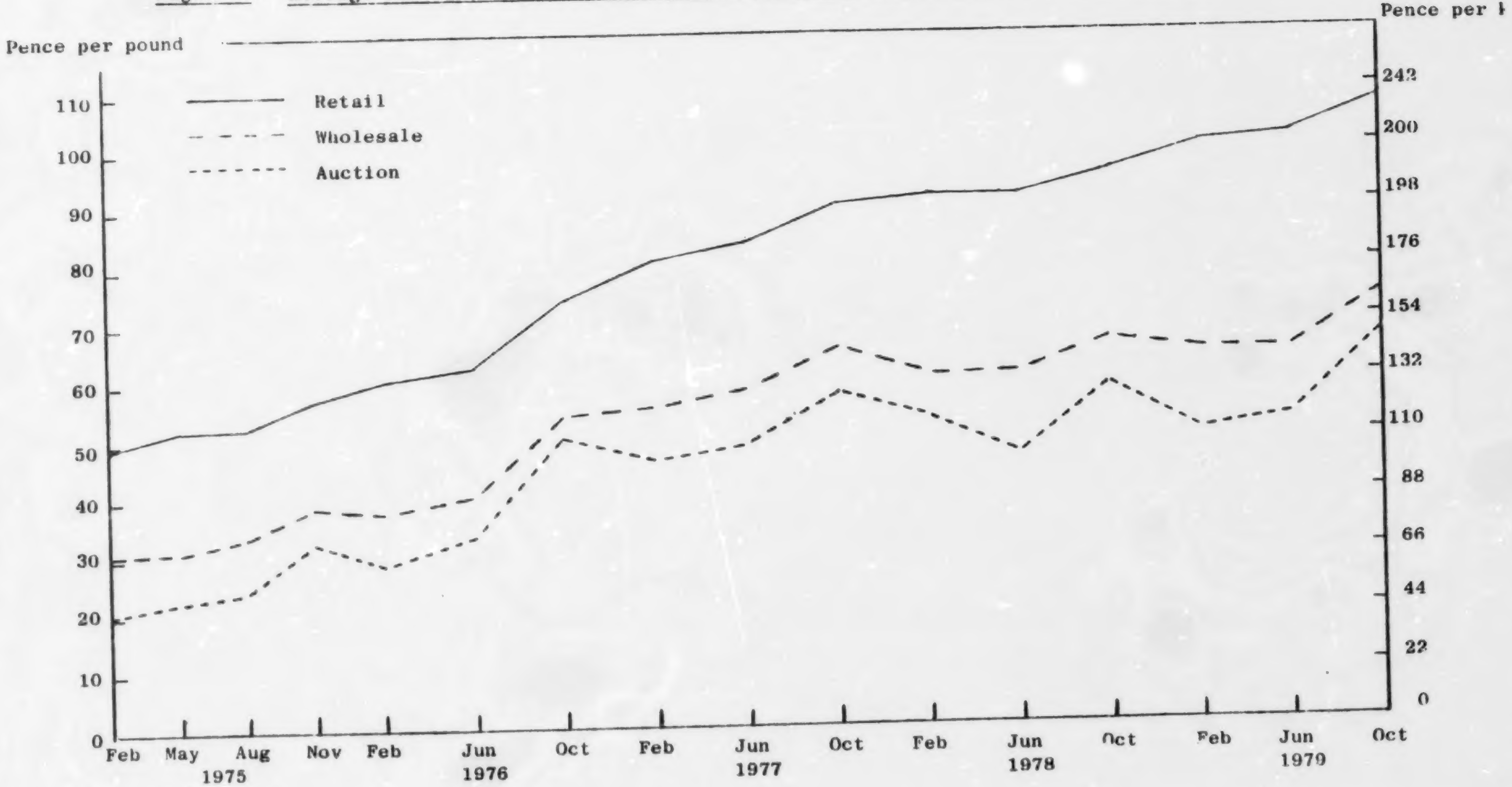


TABLE 16: MARGINS ON COD FILLETS

Pence per lb.

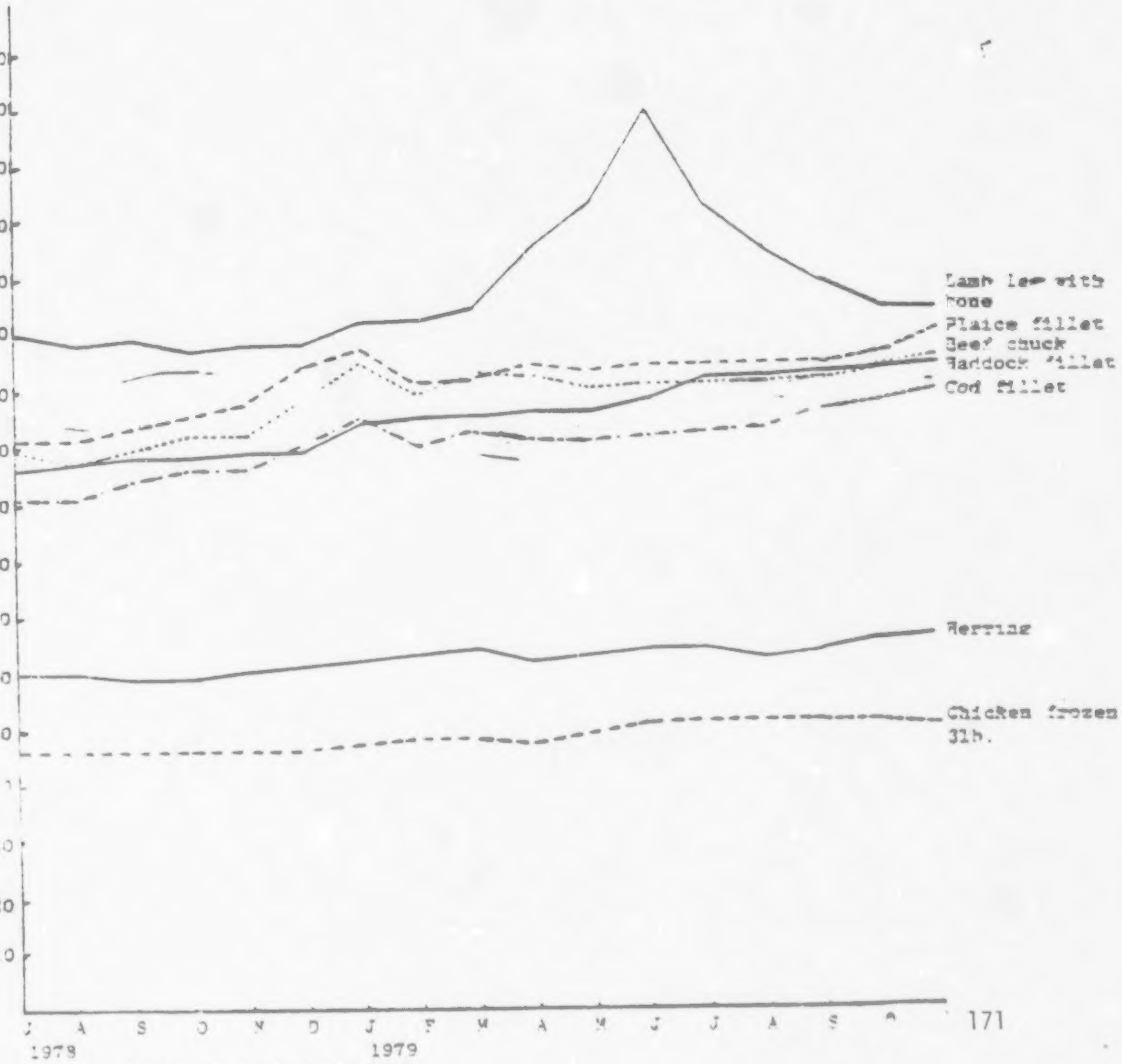
	1975				1976			1977			1978			1979		
	Feb.	May	Aug.	Nov.	Feb.	Jun.	Oct.	Feb.	Jun.	Oct.	Feb.	Jun.	Oct.	Feb.	Jun.	Oct.
Auction	20.5	22.5	24.1	32.2	28.7	33.4	50.5	46.2	48.8	57.5	53.3	46.8	58.6	50.5	52.7	66.8
Wholesale	9.8	8.4	9.7	6.6	8.6	6.9	3.8	9.2	9.6	8.1	7.3	14.1	7.8	13.9	11.7	7.0
Retail	19.2	21.2	18.4	18.2	22.8	22.4	19.7	25.3	25.4	24.5	30.8	30.7	29.2	35.8	37.1	33.4
Total	49.5	52.1	52.2	57.0	60.1	62.7	74.0	80.7	83.8	90.1	91.4	91.6	95.6	100.2	101.5	107.2

Percentages*

	1975				1976			1977			1978			1979		
	Feb.	May	Aug.	Nov.	Feb.	Jun.	Oct.	Feb.	Jun.	Oct.	Feb.	Jun.	Oct.	Feb.	Jun.	Oct.
Auction	41.4	43.2	46.2	56.5	47.8	53.3	68.2	57.2	58.2	63.8	58.3	51.1	61.3	50.4	51.9	62.3
Wholesale	19.8	16.1	18.6	11.6	14.3	11.0	5.1	11.4	11.5	9.0	8.0	15.4	8.2	13.9	11.5	6.5
Retail	38.8	40.7	35.2	31.9	37.9	35.7	26.6	31.4	30.3	27.2	33.7	33.5	30.5	35.7	36.6	31.2

Figures may not sum to 100 because of rounding

FIGURE 9 :
UNITED KINGDOM - RETAIL PRICES OF SELECTED ITEMS, Pence per lb.



Source: Department of Employment

MAJOR IMPORTERS OF GROUNDFISH IN THE UNITED KINGDOM

Snax (Ross) Ltd.,
56/58 High Street,
Ewell,
Surrey.

Chaldur Frozen Fish Co. Ltd.,
East Side,
Royal Dock,
Grimsby,
South Humberside.

Frionor Ltd.,
Hainton House,
Hainton Square,
Grimsby,
South Humberside.

J. Marr (Fish Merchants) Ltd.,
Gillett Street,
Hull,
North Humberside.

North Wall Fish Ltd.,
Fish Docks,
Grimsby,
South Humberside.

Pearce & Walker Ltd.,
North Wall,
Fish Docks,
Grimsby,
South Humberside.

Boston Fleet Fish Ltd.,
Orwell Street,
Grimsby,
South Humberside.

A. Gilberg & Co. Ltd.,
5/6 Union Quay,
North Shields,
Tyne and Wear.

Birds Eye Foods Ltd.,
Station Avenue,
Walton-on-Thames,
Surrey.

Findus Ltd.,
St. George's House,
Croydon,
Surrey.

F. Smales & Son,
West Dock Street,
Hull,
North Humberside.

A. Kalkman,
Cookre Road,
Lowestoft,
Suffolk.

Norbrit Fish Sales Ltd.,
Cross Street,
Fish Docks,
Grimsby,
South Humberside.

Brekkes Ltd.,
St. Andrew's Dock,
Hull,
North Humberside.

Marks & Spencer Ltd.,
47 Baker Street,
London, W1.

E.A. Bates Ltd.,
Cross Street,
Fish Docks,
Grimsby,
South Humberside.

Drewery Bros.,
Fish Docks,
Grimsby,
South Humberside.

Bluecrest Foods Ltd.,
Ladysmith Road,
Grimsby,
South Humberside.

Rossfish Limited,
Ross House,
Wickham Road,
Grimsby,
South Humberside.

Macfisheries Ltd.,
Ocean House,
Bracknell,
Berkshire.

UNITED KINGDOM

Some Principal Food Retailers

Associated British Foods Ltd.,
Weston Centre,
40 Berkely Square,
LONDON W1X 6BR

Associated Dairies Ltd.,
Craven House,
Kirkstall Road,
LEEDS LS3 1JE

Bat Industries Ltd. - Retail Division,
Westminster House,
7 Millbank,
LONDON SW1P 3JE

British Home Stores,
Marylebone House,
129-137 Marylebone Road,
LONDON NW1 5QD

Cavenham Ltd.,
Cavenham House,
Colnbrook,
Slough,
Berkshire SL3 OEB

Linfood Holdings Ltd.,
Fairfax House,
Fulwood Place,
LONDON WC1V 6DW

F.W. Woolworth & Co. Ltd.,
Woolworth House,
242-246 Marylebone Road,
LONDON NW1 6JL.

Marks & Spencer Ltd.,
Michael House,
37-67 Baker Street,
LONDON W1A 1DN

Safeway Food Stores Ltd.
Beddow Way,
Aylesford,
Maidstone, Kent ME20 7AT

J. Sainsbury Ltd.,
Stamford House,
Stamford Street,
LONDON SE1 9LL

Tesco Stores (Holdings) Ltd.,
Tesco House,
Delamare Road,
Cheshunt,
Hertfordshire EN8 9SL

Wheatsheaf Distribution &
Trading Ltd.,
St. George's House,
St. George's Street,
Winchester,
Hampshire

William Low & Co. Ltd.,
P.O. Box No. 73,
Baird Avenue,
Dryburgh Industrial Estate,
DUNDEE DD1 9NF

The Belgian Market for Groundfish

INTRODUCTION

Belgium's fishing industry which is the smallest of the countries under consideration is restricted by the shortness of her coastline which extends just 69 km. There are some 200, mainly artisanal, family owned fishing vessels in the three ports of Zeebrugge, Ostende and Nieupoort, which employ just over 900 fishermen. Figure 1 shows the main towns and ports in Belgium and the Netherlands.

PRODUCTION

Despite a reduction of a third in the size of the Belgian fleet over the last 10 years landings by the fleet have in recent years amounted to some 40,000 tonnes annually against an average of about 50,000 tonnes in the 1960s.

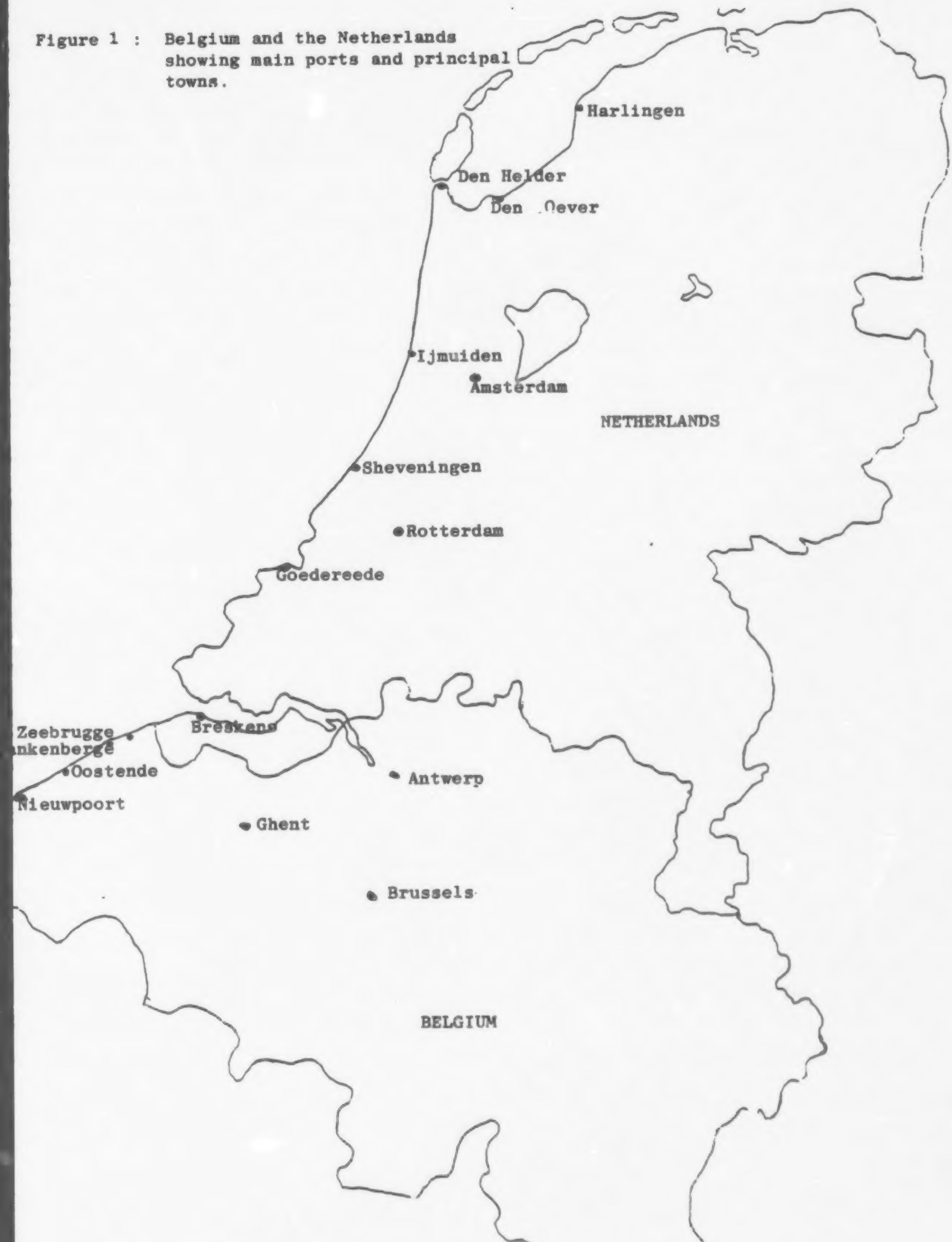
In 1978 total landings were 44,000 tonnes, of which 39,000 tonnes were landed in Belgium and 5,000 tonnes landed abroad, mainly in the U.K. About 95 per cent of the Belgian catch is of groundfish species, the rest being made up of pelagic fish and shellfish.

As the figures below show there was a 15 per cent decline in the volume of landings of major species in 1979 compared with 1978.

BELGIAN LANDINGS OF MAJOR SPECIES, 1978 AND 1979 (tonnes)

	1979	1978
Cod	10,270	15,189
Haddock	921	1,564
Saithe	644	932
Whiting	3,504	2,894
Plaice	4,467	3,973
Redfish	1,242	1,469
Rays	1,440	1,398
Sole	3,437	2,639
Shrimps	909	614
TOTAL	33,561	39,311

Figure 1 : Belgium and the Netherlands showing main ports and principal towns.



The figures show that there were small increases in whiting, plaice and sole landings but home landings of cod fell by 32 per cent. The composition of the catch with cod, plaice and redfish all being landed suggests a market which could be of interest to Newfoundland.

IMPORTS

As with other European countries, Belgium both imports and exports groundfish species. In 1978, for instance, she exported over 7,000 tonnes of fresh or chilled cod and 1,400 tonnes of frozen cod fillets, mostly to other European Community countries. In the same period she imported some 6,000 tonnes of fresh or chilled cod and about 4,500 tonnes of frozen cod fillets. That these are different products is shown by the January-August import price for fresh or frozen whole cod of 62,400 Bf against an export price of only 31,500 Bf per tonne.

Table 1 compares Belgian imports in 1978 with those in 1977. About 20 per cent of imports are of fish preparations and about 30 per cent shellfish, the rest groundfish and pelagic species. Almost all the frozen fish for the processing industry is imported.

In the 7 months to August 1979 imports totalled just under 70,000 tonnes,an increase of 15 per cent over the corresponding period in 1978. Of this figure, 32,220 tonnes were of chilled or frozen fish and of this 7,440 tonnes were fillets. The drop in the cod catch led to higher imports of fresh, chilled and frozen cod. Exports of fresh or chilled cod were also running at less than half the 1978 level.

Two-thirds of imports come from European Community countries, the main sources being the Netherlands 33 per cent, Denmark 14 per cent, Germany 8 per cent and France 7 per cent. Norway and Iceland are the other main sources of imports.

DISTRIBUTION AND CONSUMPTION

The relatively small size of the national market, both in terms of the volume of fish handled and the distance between the point of landing and the consumer has the effect of compressing the distribution chain so that importing companies also generally act as wholesalers, selling on to retail outlets. Some of the larger retailers also import directly.

The major market in Belgium is for fresh fish. In total the annual consumption of fish is about 150,000 tonnes (landed weight). This is made up of roughly 73,000 tonnes of fresh and frozen fish; 41,000 tonnes of shellfish, 31,000 tonnes of fish preparations and 5,000 tonnes of dried, salted or smoked fish.

Thus, per capita consumption of fish at about 15 kg. per year is relatively high by European standards. The annual average is made up of 7.5 kg. of fresh and frozen fish, 4 kg. of shellfish, 3 kg. of fish preparations, and 0.5 kg. of dried, salted or smoked fish.

PRICES

Changes in the volume of landings are reflected in changing average values. In the period January to November 1979 the average value of all landings increased by 14 per cent. However, plaice landings which were up on 1978 only increased by 4 per cent whereas cod which suffered the most severe decline in landings increased in average value by 21 per cent.

By contrast in the period January to November 1979, fresh or chilled imports of cod rose in average value by only 1 per cent and frozen cod fillets actually decreased in average value by 6 per cent, again reflecting the international competition in this market.

CONCLUSION /

CONCLUSION

Although Belgium is a small market for fish, it is a relatively large consumer of the species Newfoundland has on offer. Whilst cod catches have recently declined Belgium does not import large quantities of the other principal groundfish species. Her neighbours can easily supply the deficiency in high quality fresh cod. There appears to be a small opportunity for frozen cod imports.

BELGIUM

TABLE 1: IMPORTS OF FISHERY PRODUCTS BY MAJOR VARIETY

Variety	JANUARY-DECEMBER						% change	
	1977			1978ø				
	tonnes	million Bf	000 Bf/t	tonnes	million Bf	000 Bf/t	weight	av. value
Fresh or Chilled								
Freshwater fish	8,897	1115.0	125.3	9,888	1125.3	113.8	+ 11.1	- 9.2
Herring	8,435	268.7	31.9	7,238	272.4	37.6	- 14.2	+ 17.9
Sprat	1,188	18.2	15.3	1,234	19.3	15.6	+ 3.9	+ 2.0
Mackerel	2,094	27.6	13.2	1,096	15.3	14.0	- 47.7	+ 6.1
Cod	6,716	403.4	60.1	5,969	385.0	64.5	- 11.1	+ 7.3
Haddock	310	13.8	44.5	355	17.0	47.9	+ 14.5	+ 7.6
Plaice	939	34.5	36.7	676	29.6	43.8	- 28.0	+ 19.3
Sole	958	181.7	189.7	831	158.4	190.6	- 13.3	+ 0.5
Other	9,031	483.4	53.5	7,103	473.5	66.7	- 21.3	+ 24.7
Fillets	1,662	141.7	85.3	1,240	109.6	88.4	- 25.4	+ 3.6
Total	40,230	2688.0	66.8	35,630	2605.4	73.1	- 11.4	+ 9.4
Frozen (fillets)								
Cod	4,777	371.0	77.7	4,482	335.7	74.9	- 6.2	- 3.6
Other	3,797	214.4	56.5	3,402	204.0	60.0	- 10.4	+ 6.2
Total	8,574	585.4	68.3	7,884	539.7	68.5	- 8.0	+ 0.3
Dried, Salted or Smoked								
Herring	2,323	103.1	44.4	1,790	94.0	52.5	- 22.9	+ 18.2
Cod	387	42.7	110.3	499	51.1	102.4	+ 28.9	- 7.2
Mackerel	197	8.7	44.2	164	7.8	47.6	- 16.8	+ 7.7
Other	1,119	229.5	205.1	1,458	257.2	176.4	+ 30.3	- 14.0
Total	4,026	384.0	95.4	3,911	410.1	104.9	- 2.9	+ 10.0
Shellfish								
Shrimp	7,164	1214.0	169.5	6,808	1103.7	162.1	- 5.0	- 4.4
Mussels	23,994	369.0	15.4	22,020	351.0	15.9	- 8.2	+ 3.2
Other	4,164	783.4	188.1	4,052	760.7	187.7	- 2.7	- 0.2
Total	35,322	2366.4	67.0	32,880	2215.4	67.4	- 6.9	+ 0.6
Fish Preparations	20,356	1628.1	80.0	21,308	1735.6	81.5	+ 4.7	+ 1.9
Shellfish Preparations	3,470	641.9	185.0	2,958	644.5	217.9	- 14.8	+ 17.8
TOTAL	111,978	8293.8	74.1	104,571	8130.7	77.9	- 6.6	+ 5.1

ø Provisional figures

Source: Institut National de Statistique

BELGIUM

Some Principal Belgian Department and Multiple Chain Stores

Colruyt NV
97 Steenweg naar Bergen
1500 Halle
Telex No. 24160

Delhaize Frères et Cie "Le Lion" SA
53 rue Osseghem
1080 Brussels
Telex No. 21976

Delhaize Louis SA
116 rue G. Lemoine
6210 Ransart
Telex No. 51416

The Dutch Market for Groundfish

INTRODUCTION

As in other aspects of her national economy the Netherlands is a country which lives by trade. In 1978, the Netherlands imported fish to the value of 507 million guilders, they landed 402 million worth of fish and exported fish and fish products to the value of 839 million guilders.

Although the composition of Dutch landings has changed with the changing fisheries regime and the prohibition on North Sea herring fishing the total volume of landings has increased over the last few years. There are now some 25 former herring trawlers, 350 near water trawlers, 150 shrimp trawlers and 80 vessels for the important mussel fisheries. The Dutch fleet is manned by some 3,500 fishermen.

LANDINGS

Dutch landings of groundfish were 3 per cent greater by volume in the first 9 months of 1979 than in the same period in 1978. Landings of plaice at 26,000 tonnes showed a 30 per cent increase, offsetting a reduction in cod, which, at 27,040 tonnes, was 16 per cent below the 1978 level. Landings of whiting at 6,990 tonnes, dab at 2,750 tonnes, sole at 5,510 tonnes and turbot at 2,790 tonnes were all greater than the corresponding 1978 levels.

Table 1 compares the full 1978 year figures with those for 1977. Total landings at 295,624 tonnes were just over one per cent lower than the previous year. However, the portion was largely maintained by substantial mackerel landings, much of which is exported to Nigeria.

Cod /

Cod landings at 40,978 tonnes were 59 per cent up on the 1977 level. This figure is small, however, compared with Icelandic landings of 318,000 tonnes in 1978 or Norwegian landings of 279,000 tonnes. Plaice landings in 1978 were 40 per cent down on the 1977 figure.

IMPORTS

Comparing the first nine months of 1979 with the same period in 1978 total imports at 93,120 tonnes were 3 per cent higher whilst exports rose in volume by 26 per cent to reach 218,170 showing a very satisfactory positive balance in favour of the Dutch industry.

Exports of dried, salted or smoked fish were the only category not to show an increase over the corresponding period in 1978. As with other European Community countries the Netherlands did much of her trade in groundfish with other member countries. The U.K. was the most important market for Dutch fresh, chilled or frozen cod and plaice taking 12,900 tonnes of the former and 8,410 tonnes of the latter.

Tables 2 and 3 show Dutch import and export statistics for 1977 and 1978. In both years the main volume of imports was of pelagic fish and the largest export category was mackerel. The principal exports of groundfish in 1978 were fresh, chilled or frozen cod at 26,376, plaice at 14,954 and sole at 11,921 tonnes Whole cod exports were 77 per cent up on their 1977 level. These figures compare with German whole cod exports in 1978 of 14,630 tonnes, and Danish of 12,667 tonnes. In 1978 the Netherlands imported 4,824 tonnes of unfilleted cod and 3,659 tonnes of fillets. Whole plaice imports which were double the 1977 level in response to a decline in landings stood at 5,352 tonnes. There was no increasing trend in plaice imports in 1979. These figures suggest that the Dutch market does not offer substantial immediate opportunities for Newfoundland.

DISTRIBUTION

Marketing channels for fish and fish products vary according to product and intended destination. There is a high degree of concentration in the fish wholesaling and processing industry, some 50 per cent of turnover being made by some 40 companies.

The larger merchants have connections in the main French, German and U.K. markets and specialise in trading in fish.

It should be mentioned that the Netherlands do not have inland wholesale markets like Billingsgate in London. The auction markets are the only direct meeting points for the several types of wholesalers. The retailers are supplied by the wholesalers except in the coastal area where fishmongers procure their merchandise at wholesalers who set up their business in or near the auction hall.

In recent years there have developed some ten modern industrial fish processing companies. Their speciality is in the filleting and freezing of flatfish for export,Italy being a very important market for Dutch plaice.

Also in recent years investment in traditional fish shops has arrested decline in fish consumption and has maintained the position of the near 2,000 fish retailers in the face of supermarket competition.

CONSUMPTION

Fish consumption was estimated at 12 kg. in 1978, made up of herring 1.7 kg., white fish 5.2 kg., shellfish 3.3 kg., canned fish 1.6 kg. and fresh water fish 0.3 kg. The Dutch preference in white fish is for cod, plaice and haddock. There is also a strong preference for fresh fish, although increasingly the consumer is buying filleted fish in preference to whole fish.

Typically /

Typically the frozen fish on display in supermarkets are retail packs of cod, haddock and saithe. Almost all these products from West Germany as the Netherlands has never had a distant water fleet such as those of the U.K. or Germany. Thus there is no production of white fish from frozen blocks in the Netherlands. There is some evidence of a move towards saithe and plaice in response to a declining availability of cod. However, further white fish imports will be required only occasionally and seasonally.

PRICES

The substantial increase in cod landings in 1978 over the previous year's figure led to stagnation in the average value of landings of cod. The import price of cod fell some 8 per cent. The import price of whole cod at 1.95 guilders per kg. compared with a landed value of 1.86 guilders. By contrast plaice prices rose by 18 per cent in response to a decline in landings. The cod export average value at 2.06 guilders per kg. remained the same as in 1977.

Figures for the first 9 months of 1979 show that the average import value of cod had fallen to 1.77 guilders, some 10 per cent below the value for the same period in 1978. Over the same period the average value of plaice improved by 12 per cent.

CONCLUSION

In the longer term there is some evidence of the Dutch being prepared to accept new fish products leading to a greater variety of fresh and frozen products on the market. As in other Western European markets changing eating patterns and an increased awareness of the need for a balanced diet may lead to some increase in fish consumption.

F3

ETHERLANDS

ABLE 1: LANDINGS*AND VALUES OF MARINE FISH AND SHELLFISH

Species	JANUARY-DECEMBER						% change	
	1977			1978				
	tonnes	000 gld	gld/t	tonnes	000 gld	gld/t	weight	av. value
emersal								
Haddock	1,469	2,675	1,821	749	1,335	1,782	- 49.0	- 2.1
Cod	25,713	47,813	1,859	40,978	76,128	1,858	+ 59.4	- 0.1
Saithe	5,045	6,046	1,198	4,094	5,921	1,446	- 18.9	+ 20.7
Whiting	7,477	11,411	1,526	8,352	11,232	1,345	+ 11.7	- 11.9
Gurnard	1,045	1,179	1,128	929	1,195	1,286	- 11.1	+ 14.0
Plaice	45,234	72,608	1,605	27,101	51,501	1,900	- 40.1	+ 18.4
Flounder	1,230	740	602	1,204	941	782	- 2.1	+ 29.9
Dab	3,609	3,982	1,103	3,157	3,858	1,222	- 12.5	+ 10.8
Sole	10,410	117,557	11,293	6,488	75,823	11,687	- 37.7	+ 3.5
Turbot	3,029	22,471	7,419	3,026	24,339	8,043	- 0.1	+ 8.4
Brill	1,075	4,220	3,926	914	4,711	5,154	- 15.0	+ 31.3
Other	2,179	5,643	2,590	2,719	5,714	2,102	+ 24.8	- 18.8
Total	107,515	296,345	2,756	99,711	262,698	2,635	- 7.3	- 4.4
elagic								
Herring	16,612	44,939	2,705	7,026	16,271	2,316	- 57.7	- 14.4
Sprat	1,501	982	654	2,887	1,885	653	+ 92.3	- 0.2
Mackerel	35,603	36,614	1,028	48,964	39,255	802	+ 37.5	- 22.0
Other	3,061	2,992	977	12,000	7,854	655	+292.0	- 33.0
Total	56,777	85,527	1,506	70,877	65,265	921	+ 24.8	- 38.8
hellfish								
Shrimp	3,501	20,028	5,721	3,891	17,468	4,489	+ 11.1	- 21.5
Mussels	95,068	24,887	262	103,030	37,059	360	+ 8.4	+ 37.4
Oysters	1,161	15,622	13,456	1,124	15,521	13,809	- 3.2	+ 2.6
Other	182	339	1,863	86	141	1,640	- 52.7	- 12.0
Total	99,912	60,876	609	108,131	70,189	649	+ 8.2	+ 6.6
ot for Human Consumption	34,849	8,663	249	16,905	3,950	234	- 51.5	- 6.0
OTAL	299,053	451,411	1,509	295,624	402,102	1,360	- 1.1	- 9.9

Includes landings by foreign fishing vessels and excludes landings by Dutch vessels abroad.

Source: Centraal Bureau voor de Statistiek

NETHERLANDS

TABLE 2: IMPORTS OF FISHERY PRODUCTS FOR HUMAN CONSUMPTION BY MAJOR VARIETY

Variety	JANUARY-DECEMBER						% change	
	1977			1978				
	tonnes	000 gld	000 gld/t	tonnes	000 gld	000 gld/t	weight	av. value
Fresh, Chilled or Frozen (exc. Fillets)								
Salmon	831	11,481	13.82	1,113	13,561	12.18	+ 34	- 12
Eels	4,494	37,485	8.34	5,020	45,616	9.09	+ 12	- 9
Herring	26,545	53,875	2.03	32,768	76,920	2.35	+ 23	+ 16
Mackerel	17,460	13,083	0.75	12,694	9,554	0.75	- 27	*
Sardines	503	497	0.99	1,266	1,148	0.91	+152	- 8
Cod	5,661	11,938	2.11	4,824	9,383	1.95	- 15	- 8
Saithe	1,933	2,600	1.35	1,223	2,041	1.67	- 37	+ 24
Haddock	1,797	3,344	1.86	1,445	3,114	2.16	- 20	+ 16
Plaice	2,712	4,086	1.51	5,352	9,733	1.82	+ 97	+ 21
Sole	811	7,532	9.29	1,529	13,905	9.09	+ 89	- 2
Other	6,281	15,780	2.51	6,865	18,249	2.66	+ 9	+ 6
Total	69,028	161,701	2.34	74,099	203,224	2.74	+ 7	+ 17
Fresh, Chilled or Frozen Fillets								
Cod	4,985	27,880	5.59	3,659	20,524	5.61	- 27	*
Saithe	1,338	5,541	4.14	1,702	7,594	4.46	+ 27	+ 8
Haddock	428	2,732	6.38	345	2,219	6.43	- 19	+ 1
Other	1,973	7,456	3.78	1,335	7,175	5.37	- 32	+ 42
Total	8,724	43,609	5.00	7,041	37,512	5.33	- 19	+ 7
Dried, Salted or Smoked								
Herring	10,243	22,650	2.21	13,691	30,400	2.22	+ 34	*
Other	600	4,240	7.07	686	4,500	6.56	+ 14	- 7
Total	10,843	26,890	2.48	14,377	34,900	2.43	+ 33	- 2
Shellfish								
Shrimps	4,753	41,721	8.78	6,252	48,154	7.70	+ 32	- 12
Mussels	2,840	905	0.32	463	125	0.27	- 84	- 16
Oysters	1,392	9,379	6.74	1,781	11,976	6.72	+ 28	*
Other	5,161	17,417	3.37	5,063	22,303	4.41	- 2	+ 31
Total	14,146	69,422	4.91	13,559	82,558	6.09	- 4	+ 24
Fish and Shellfish Preparations								
Salmon	3,904	33,063	8.47	4,892	36,179	7.40	+ 25	- 13
Fillets	3,118	15,354	4.92	3,162	16,578	5.24	+ 1	+ 7
Tuna	1,442	7,017	4.87	1,407	6,058	4.31	- 2	- 11
Mackerel	1,478	4,223	2.86	1,237	3,304	2.67	- 16	- 7
Sardines	1,132	4,612	4.07	1,043	4,739	4.54	- 8	+ 12
Shrimps	4,039	38,525	9.54	4,511	45,570	10.10	+ 12	+ 6
Crab	652	18,530	28.42	804	22,318	27.76	+ 23	- 2
Other	2,428	12,051	4.96	2,579	14,081	5.46	+ 6	+ 10
Total	18,193	133,375	7.33	19,635	148,827	7.58	+ 8	+ 3
TOTAL	120,934	434,997	3.60	128,711	507,021	3.94	+ 6	+ 9

* Nil or less than half last digit used

Source: Centraal Bureau voor de Statistiek - Maandstatisti
van de Buitenlandse Handel

NETHERLANDS

TABLE 3: EXPORTS OF FISHERY PRODUCTS FOR HUMAN CONSUMPTION BY MAJOR VARIETY

Variety	JANUARY-DECEMBER						% change	
	1977			1978				
	tonnes	000 gld	000 gld/t	tonnes	000 gld	000 gld/t	weight	av. value
Fresh,Chilled or Frozen(exc.Fillets)								
Eels	1,389	14,117	10.16	1,480	16,307	11.02	+ 7	+ 8
Herring	7,639	14,479	1.90	3,989	10,697	2.68	- 48	+ 41
Sprat	1,322	1,402	1.06	1,564	1,653	1.06	+ 18	*
Mackerel	24,940	18,775	0.75	58,760	41,962	0.71	+136	- 5
Cod	14,894	30,692	2.06	26,376	54,315	2.06	+ 77	*
Saithe	3,558	4,679	1.32	2,765	4,072	1.47	- 22	+ 11
Whiting	1,366	1,648	1.21	2,410	2,707	1.12	+ 76	- 7
Plaice	15,459	30,723	1.99	14,954	33,958	2.27	- 3	+ 14
Sole	10,615	126,289	11.90	11,921	139,917	11.74	+ 12	- 1
Other	13,093	69,993	5.35	17,131	76,668	4.48	+ 31	- 16
Total	94,275	312,797	3.32	141,350	382,256	2.70	+ 50	- 19
Fresh,Chilled or Frozen Fillets								
Cod	550	2,851	5.18	1,351	7,188	5.32	+146	+ 3
Other	13,723	82,004	5.98	14,265	91,441	6.41	+ 4	+ 7
Total	14,273	84,855	5.95	15,616	98,629	6.32	+ 9	+ 6
Dried,Salted or Smoked								
Herring	24,008	74,527	3.10	18,831	74,317	3.95	- 22	+ 27
Mackerel	2,667	7,433	2.79	2,685	7,656	2.85	+ 1	+ 2
Other	2,152	15,765	7.33	1,552	16,095	10.37	- 28	+ 41
Total	28,827	97,725	3.39	23,068	98,068	4.25	- 20	+ 25
Shellfish								
Shrimps	4,536	40,664	8.96	5,714	47,490	8.31	+ 26	- 7
Mussels	44,580	39,869	0.89	46,539	40,623	0.87	+ 4	- 2
Oysters	1,085	13,775	12.70	811	10,229	12.61	- 25	- 1
Other	5,286	23,961	4.53	5,307	29,541	5.57	*	+ 23
Total	55,487	118,269	2.13	58,371	127,883	2.19	+ 5	+ 3
Fish and Shellfish Preparations								
Herring	4,927	23,237	4.72	4,148	22,217	5.36	- 16	+ 14
Mackerel	2,077	7,084	3.41	1,978	7,296	3.69	- 5	+ 8
Fillets	3,756	18,848	5.02	4,378	23,317	5.33	+ 17	+ 6
Shrimps	3,094	45,425	14.70	2,727	43,359	15.90	- 12	+ 8
Other	5,399	33,133	6.14	5,568	35,539	6.38	+ 3	+ 4
Total	19,253	127,797	6.64	18,799	131,728	7.01	- 2	+ 6
TOTAL	212,115	741,443	3.50	257,204	838,564	3.26	+ 21	- 7

* Nil or less than half last digit used

Source: Centraal Bureau voor de Statistiek -
Maandstatistiek van de Buitenlandse Handel

THE NETHERLANDS

Some Importers of Fish

Gebr. Dil BV
Kerklaan 40
AKERSLOOT
Tel 02513 - 12306

Fa A van der Vlis
Laan van Meerdervoort 994
's-GRAVENHAGE
Tel 070 - 250280

Jac Vooijs en Zonen BV
Visafslagweg 30
's-GRAVENHAGE
Tel 070 - 552964

BV Wildhandel J van Leendert
Postbus 540
Fregatweg 52
MAASTRICHT
Tel 043 - 16785

W Kok-Spaarndam BV
Vijfeikenweg 29
OOSTERHOUT (NBr)
Tel 01620 - 25350

Rederij en Haringhandel v/h Hoogendijk & Vriens BV
Postbus 19
Kon Wilhelminahaven NZ6
VLAARDINGEN
Tel 010 - 343029

Zeevisgroothandel Berkhout BV
Postbus 507,
Rijksvishal A 16-18
IJMUIDEN
Tel 02550 - 10602

Zeevisgroothandel Koningstein-Schouten
Postbus 306
Rijksvishal D 2-3
IJMUIDEN
Tel 02550 - 15739

BV Unievis
Rijksvishal B 7-8-9
IJMUIDEN
Tel 02550 - 21050

V.IJ.V. BV
Rijksvishal C7
Ijmuiden
Tel 02550 - 14477

BV Novavis
Rijksvishal C16-17-18
IJMUIDEN
Tel 02550 - 14436

Salor Spakenburg BV
Zuidwenk 45
SPAKENBURG
Tel: 03499 1810

Mr. J.D. Scmidt
Firma Schmidt
Vasteland 42
ROTTERDAM
Tel: 010 122769

Herman Smit & Zoon (Diepvries Smit)
Schulpplein 7
ROTTERDAM
Tel: 010 295339

Multiples

Albert Heijn
Ankersmidplein 2
Zaandam

Miro
Ankersmidplein 2
Zaandam

Simon de Wit
Ankersmidplein 2
Zaandam

Edah BV
Kanaaldijk 82
Helmond

Purchasing Organisations

Kok-Ede BV
Frankeneng 1
Ede (Gld)

Centraal Buro Spar Nederland
Import Office:
Intergroup Trading BV
Rokin 101. AMSTERDAM

Ster Inkoop Organisatie SIO BV
Arnhemseweg 92
Amersfoort

Zico International
Plaza 308
Eindhoven

The Italian Market for Groundfish

INTRODUCTION

With a population of some 56 million people Italy ranks equal second in Western Europe with U.K. behind Germany. The capital, Rome, has a population of some 2.9 million, followed by Milan with 1.7 m., Naples and Turin 1.2 m. Figure 1 shows the main fishing ports, towns and regions of Italy.

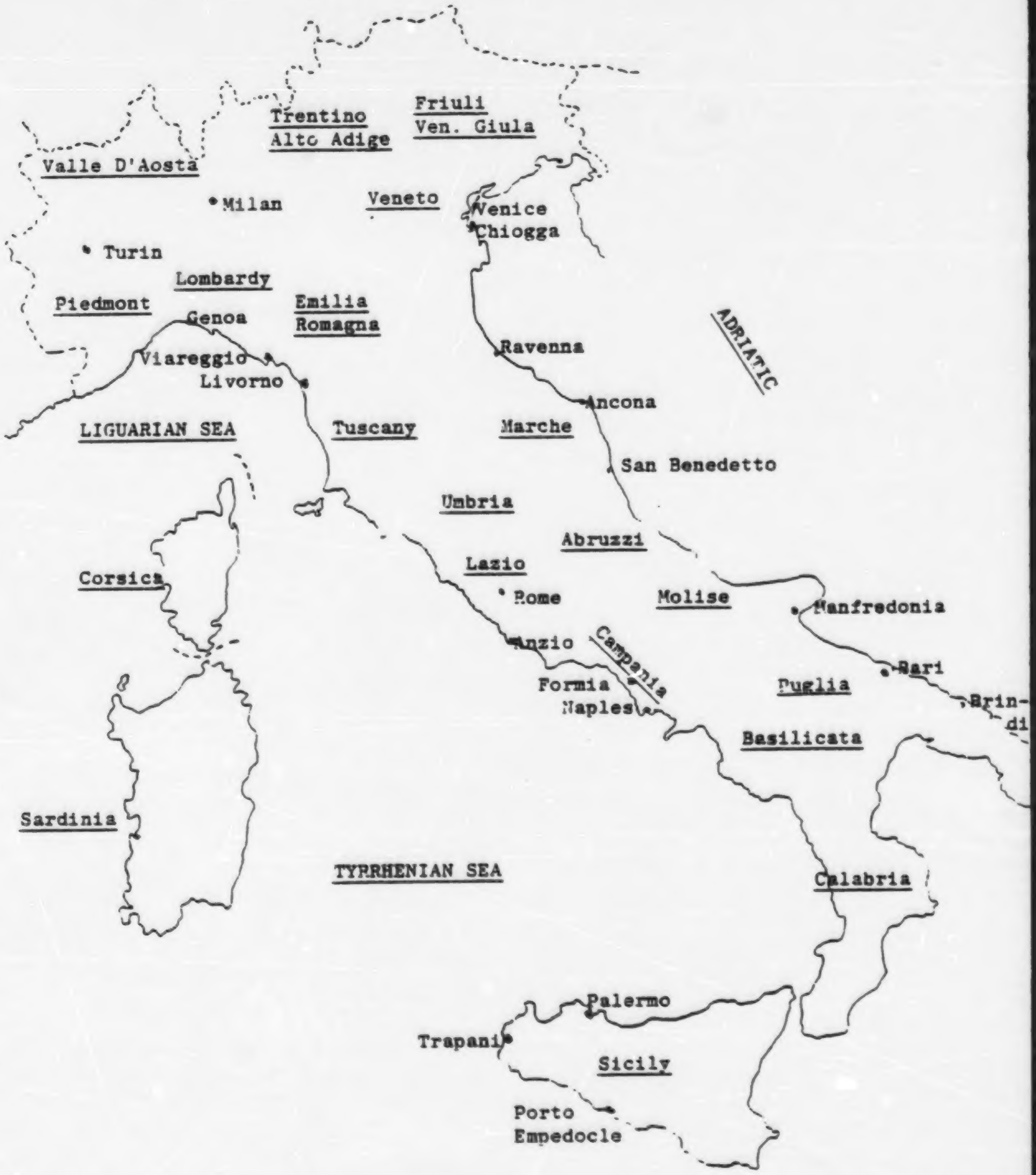
Although Italy has a very large fishing fleet, about a half of total Italian vessels are unmotorised. Similarly, although there are some 65,000 Italian fishermen many are only part-time fishermen. Italy posesses some 50 ocean going vessels of which 20 are over 1,000 tonnes. These vessels have traditionally operated beyond the unproductive waters of the Mediterranean off West Africa, North and South America. In all these areas Italy will experience difficulty in retaining her fisheries presence.

PRODUCTION

Data on landings published in the Bollettino Mensile di Statistica are not as complete as one would hope for, but they do show that catches by the Italian fleet totalled 193,920 tonnes in the period January to July 1979, against a total of 195,130 tonnes in the same period in 1978. To have some idea of the major species fished by the Italians we can look at the total landings for 1978, which give the following breakdown:-

Anchovies /

Figure 1: Italy: Map of Main Fishing Ports, Towns and Regions



Anchovies - 51,725 tonnes
Sardines - 51,463
Tunas - 2,801
Mackerel - 3,080
Hakes - 11,511
Horse mackerel - 7,693
Goatfish - 7,311

Total landings for 1978 were 357,860 tonnes, so it appears that, if the present trend continues, landings for 1979 will be somewhat lower. Thus, with the exception of hake, the main species taken by Italian fishermen are the small pelagic species, notably anchovy and sardine.

IMPORTS

Italy is a major net importer of fish. A visit to the fish market in Milan is rewarded by the sight of fish from all over the world: hake from the Argentine, tuna and squid from Japan, shellfish from India, from Panama and from Indonesia.

The Mediterranean fisheries yield an abundance of small pelagic fish, the surplus of which are exported, France being the main buyer of sardines, Spain the principal market for anchovies.

Italy is a major importer of cephalopods, notably squid and also a large purchaser of tuna. However, it is the market for dried and salted cod which is of most interest to Newfoundland. Table 1 sets Italian imports in their overall context and shows the important position of dried and salted cod. Salt and dried cod imports rose some 3 per cent to 34,723 tonnes in 1978. The table below breaks down the imports by country of origin.

Italian /

Italian Imports of Dried, Salted or Smoked Cod by Country of Origin, 1978

	Tonnes
Iceland	5,664
Norway	18,438
Spain	1,703
Canada	979
Faroes	5,903
Others	2,036
Total	34,723

Over half the supply in 1978 came from Norway, with the Faroes and Iceland following. Canada provided some 3 per cent of Italy's requirement.

Figures for the first 6 months of 1979 showed that salt and dried cod imports fell slightly compared with 1978 to some 11,150 tonnes. Norway supplied 56 per cent of the total against 53 per cent in 1978. Norwegian statistics show that in the first nine months of 1979, Italy was Norway's top market for dried or salted cod.

As Italian incomes rise there is, as elsewhere, likely to be a move away from dried and salted cod to other fish products. Prices in fish markets are generally higher on a Thursday and Friday due to the Roman Catholic tradition of Friday fish eating. There has been some indication of a reawakening traditional Catholic values under the present Papacy. It is too early to say whether this would lead to an increase in the consumption of cod. However, regardless of the market trend this is a market where Newfoundland might expect to have a larger share.

DISTRIBUTION /

DISTRIBUTION

Fresh fish enters the Italian market from two sources: Italian fishing vessels operating in the Mediterranean and fresh imports, mainly from Norway and Denmark which are brought in by road by specialist importers in the north of the country.

The role of the port markets and coastal wholesalers is to be seen, primarily, as suppliers of fish to the immediate area in which they are located. Of course, the significance of this will vary according to the level of landings at any particular port, the larger ones despatching more of their fish to the inland markets. For example, a large proportion of Chiogga's fish is sent to the inland markets of Milan and Turin after first sale. These markets also serve as an assembly point for the landings at smaller ports in the vicinity. Of the fish dealt with at Genoa 40 per cent is landed at the port, 30 - 35 per cent originates from other ports and the remainder are imports.

Frozen fish enters the distribution system from two sources: Italian freezer trawlers and imports. Landings from Italian vessels account for a very small proportion of total supplies of frozen fish. Regardless of its origin all frozen fish passes through the same distribution system. There are about a dozen medium to large sized importers/wholesalers, perhaps as many medium sized companies and a few small firms which tend to be highly specialised. These companies purchase fish, in perhaps very large quantities, eg 500-1,000 tonne consignements, provide the initial cold storage facilities and distribute it to local wholesalers and to processors on either a national or regional basis, depending on their size. Most imported fish is eaten in the /

the north of the country the main importing centres being Milan and Genoa. The largest importers distribute nationally; smaller importers are regionally orientated.

The Italian frozen food market would be difficult to enter at the processed fish stage as production and distribution are largely controlled by SAGES, the Italian Unilever Company and, with supermarkets tending to be grouped regionally there are likely to be less central buying opportunities than in other major Western European markets.[1/]

CONSUMPTION

Figures for the years 1972 to 1974 produced by FAO show that consumption of fresh and frozen fin fish averaged 6.2 kg. per annum. This is low compared to other European countries, only West Germany and Ireland having lower consumption figures for the same period.

There are marked regional differences in Italian fish consumption due to the unequal standards of living. Table 2 gives the structure of the average monthly family expenditure on food by area. Over 5 per cent of total monthly family budget for food is spent on fish by families in the south and the islands compared to 2 per cent in the north east and north west and 3 per cent in Italy as a whole. More striking is the fact that 2.2 per cent of total expenditure per month is spent on fish by families in the south and the islands compared to 0.6 per cent in the north west and 1.2 per cent in Italy as a whole. The level of spending on fish in the north is liable to increase as families from the south migrate to the large industrial cities and take their fish consumption habits with them.

The /

[1/] The Dutch have developed a market for frozen plaice fillets to Italy.

The consumption of frozen fish has increased a great deal in recent years. This has gone hand in hand with a general increase in the purchase of all frozen foods as the cold chain is set up and the product range for frozen fish is widened. Frozen foods normally gain popularity as a convenience food, the demand for which increases with higher incomes, and a higher labour force participation by females.

As income increases the influences hampering sales of frozen foods will diminish. Such factors include consumer resistance to frozen foods, and the low level of freezer ownership due to the abundance of seasonal vegetables in southern Europe. The market resistance to frozen food is at least partly due to the tradition of food preparation in the home.

There is little or no public authority catering. Meals are not served in schools (except the kindergartens). Prisons, the armed forces, and similar institutions, purchase fish and other perishable foods locally. Industrial plant canteens are the largest single component of this market. These canteens purchase their requirements from small local wholesalers and offer very little opportunity to exporters.

PRICES

Two points of interest to note are that the general price of domestic produce is higher than the general price of imports, and fresh fish is more expensive than frozen. There is some correlation between price and imports.

The Italian market is the most quality conscious in Europe. The Italian consumer is prepared to pay a premium for freshness. Although against the law, frozen fish is sometimes thawed to be sold as fresh fish. However, exporters of prime quality fresh fish /

fish from northern Europe ensure that their produce is in top condition when it reaches Italy. Limited current price data from markets in Italy suggest that the mark up for fresh fish over frozen fish is quite significant.

Comparing 1978 with 1977 the average value of imported whole hake rose 14 per cent whilst dried and salted cod was up 11 per cent. In the first 6 months of 1979, there was a substantial increase in hake price over the corresponding period in 1979 of some 33 per cent whilst the cod price was only 6 per cent higher, again reflecting the sluggishness of this market.

CONCLUSION

The majority of the marine resources of the Mediterranean whilst incompletely assessed, appear to have limited potential for more intensive exploitation. There is strong evidence to suggest that many demersal species are already over-fished, for example, on the Continental Shelf, and whilst some pelagic stocks may offer scope for increased exploitation, it is clear that the prospects for developing the Italian coastal marine fisheries are very limited. On the other hand, there will be an extension of aquaculture, however, its potential for increasing the overall protein supply is limited.

The Italians are a food loving nation who demand the best of quality in the fish they consume. However, as the constraints on the growth of the frozen food industry disappear, demand for frozen fish will increase. This suggests that Italy has some long-term potential for Newfoundland.

The /

The extent to which new trade will supplement Italian domestic production in supplying the home market for fish will be heavily dependent on what success Italy has in her joint ventures with emergent fishing nations and the extent to which former lines of supply are able to adjust to the new fisheries regime.

TABLE 1: IMPORTS OF FISHERY PRODUCTS FOR HUMAN CONSUMPTION BY MAJOR VARIETY

Variety	JANUARY-DECEMBER						% chang
	1977			1978			
	tonnes	million lire	million lire/t	tonnes	million lire	million lire/t	weight
Fresh, Chilled or Frozen (exc. Fillets)							
Salmon	695	3880.2	5.58	620	3202.3	5.17	- 11
Eel	2,427	5505.8	2.27	2,775	7168.4	2.58	- 14
Tunas	62,662	71029.4	1.13	66,359	73630.2	1.11	- 6
Mackerel	7,854	3509.6	0.45	6,814	3776.0	0.55	- 13
Saithe	5,265	2235.0	0.42	7,289	3964.1	0.54	- 38
Hake	7,242	3593.0	0.50	7,631	4341.8	0.57	- 5
Sole	2,701	9693.9	3.59	2,965	9925.6	3.35	- 10
Shark	6,249	7762.5	1.24	7,412	10807.2	1.46	- 19
Other	30,374	40584.7	1.31	32,730	55338.6	1.69	- 6
Total	125,969	147794.1	1.17	134,615	172154.2	1.28	- 7
Fresh, Chilled or Frozen Fillets							
Saithe	1,355	1371.2	1.01	1,199	1009.4	0.84	- 12
Hake	1,804	1932.6	1.07	1,145	1915.0	1.67	- 37
Other	14,717	29205.2	1.98	12,206	28811.3	2.36	- 17
Total	17,876	32509.0	1.82	14,550	31735.7	2.18	- 19
Dried, Salted or Smoked							
Herring	1,082	2314.4	2.14	1,248	3056.7	2.45	- 15
Anchovy	2,818	5379.0	1.91	2,769	5037.0	1.82	- 2
Cod	33,572	73912.9	2.20	34,723	84650.5	2.44	- 3
Other	369	1747.1	4.73	432	2676.4	6.20	- 17
Total	37,841	83353.4	2.20	39,172	95420.6	2.44	- 4
Shellfish							
Shrimps	2,676	5935.2	2.22	4,984	13727.0	2.75	- 86
Oysters	567	320.1	0.56	821	477.5	0.58	- 45
Mussels	5,538	1424.6	0.26	7,748	2665.8	0.34	- 40
Squid	15,664	14957.0	0.95	23,011	35231.7	1.53	- 47
Cuttlefish	8,282	7932.6	0.96	9,413	9640.8	1.02	- 14
Octopus	4,765	3501.3	0.73	8,453	7597.7	0.90	- 77
Other	4,928	9103.8	1.85	6,519	15315.8	2.35	- 32
Total	42,420	43174.6	1.02	60,954	84656.3	1.39	- 44
Fish Preparations							
Mackerel	5,905	8804.5	1.49	6,626	10512.8	1.58	- 12
Tuna	998	2284.8	2.29	1,720	4980.0	2.90	- 72
Sardines	1,921	2534.2	1.32	1,122	1743.2	1.55	- 42
Fillets	10,136	18729.5	1.84	7,829	16514.4	2.11	- 23
Other	1,932	4738.5	2.45	2,314	5875.7	2.54	- 20
Total	20,912	37091.5	1.77	19,631	39626.1	2.02	- 6
Shellfish Preparations	202	667.6	3.30	679	2670.4	3.93	-236
TOTAL	245,220	344590.2	1.41	269,601	426263.3	1.58	- 10

Source: Instituto Centrale di Statistica -
Statistisca Mensile del Commercio c
l'Estero

E 2: FAMILY CONSUMPTION: STRUCTURE OF FAMILY EXPENDITURE 1976. MONTHLY PER CAPITA AVERAGES

	North West		North East		Central		South and Islands		Italy	
	V	%	V	%	V	%	V	%	V	%
l Expenditure	105.01	269	99.53	280	93.86	265	66.34	237	88.25	261
	39.03	100	35.55	100	35.44	100*	28.04	100*	33.84	100
d, Cereals, Deriratives	3.92	10	3.70	10	3.64	10	3.67	13	3.73	11
	12.11	31	10.80	30	11.58	33	7.75	28	10.23	30
	0.65	2	0.67	2	1.25	4	1.45	5	1.05	3
, Cheese, Eggs	4.71	12	4.52	13	3.78	11	3.50	12	4.07	12
Fat	2.41	6	2.19	6	2.39	7	2.13	8	2.27	7
toes, Veg., Fruit	4.59	12	4.12	12	4.45	13	3.93	14	4.25	13
r, Coffee, General Foods	2.06	5	2.01	6	1.64	5	1.54	5	1.79	5
k	3.47	9	2.98	8	2.67	8	2.05	7	2.73	8
ide Meals	5.11	13	4.56	13	4.04	11	2.02	7	3.72	11

o not sum to 100 due to rounding.

e: Pound Sterling
(conversion rate = 1502 L./£1)
Percentage of total expenditure on food.

ce: Italian Yearbook of Statistics

ITALY

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PESCLAUDIO S.p.A.
Via Ponte Vetero 16
20121 MILANO
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Telex: 312550

PESCAGEL S.p.A.
Via Copernico 42
20125 MILANO
Tel: (02) 606301
Telex: 330526

ETRURIA S.p.A.
Piazza Bertarelli 2
20122 MILANO
Tel: (02) 807765
Telex: 334057

INTERPESCA .p.A.
Via L. da Vinci
(angolo Via Volta)
20090 TREZZANO SUL NAVIGLIO
(Milano)
Tel: (02) 4456241
Telex: 310633

ITTIMPORT S.p.A.
Via Plava 2
22053 LECCO (Como)
Tel: (0341) 23053
Telex: 380010

ZANELLA
Corso Regina Margherita 194
10152 TORINO
Tel: (011) 471730

CETI S.n.c.
Via Di Nanni 95
10141 TORINO
Tel: (011) 331296

LO SCOGLIO
Via Madama Cristina 58
10125 TORINO
Tel: (011) 651383

FIOROTTO ALDO
Via Mercato Ittico 45
TRONCHETTO (Venice)
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Telex: 410187 Fiorom I

ROSSI ADRIANO
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30030 MALCONTENTA (Venezia)
Tel: (041) 969047
Telex: 410696

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30034 MIRA (Venezia)
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l: (06) 5409706
lex: 610260 Sages I

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MAZZOLA IGINO S.p.A.
Piazza Nunziata 5
16124 GENOVA
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Telex: 270189 Igma I

DE BENEDETTI & C. S.n.c.
Darsena Sex C 15
16100 GENOVA
Tel: (010) 252030

Principal Producers of Frozen Fish

SAGES
Via Casali Nuovo 8
ROMA
Tel: 54.09.706

TONTINI PESCA
Via della Cannuccia
ANZIO (ROMA)
Tel: 98.30.901

SURGELA
S. Benedetto del Tronto
ASCOLI PICENO - (MARCHE)

The Portuguese Market for Groundfish

INTRODUCTION

Since 1974 there has been upheaval in the political economy of Portugal. The internal changes, coming at a time of escalating energy costs and a down turn in the world economy, which led to a decline in demand for Portuguese workers and exports, exacerbated Portugal's problems.[1]

The population which had been declining in the early seventies, received a sudden boost in 1975 with the return of Portuguese nationals from the former colonies. The 1977 population of 9.8 million was concentrated very largely in the coastal provinces, particularly around Lisbon and Porto, the only provinces to have experienced population growth in recent years. Figure 1 illustrates the country's principal demographic features.

The influx of population in 1975 from former African colonies led to increased demand for food products "most of which had to be imported because of sluggish agricultural growth."[2] However, consumption per head has not increased because, in a period of very rapid price inflation, the population has been forced to accept stagnant or declining levels of real consumption.

Successive Portuguese Governments have faced the task of reducing domestic demand and imports and of increasing savings and exports. Agreement with the IMF on a stabilisation package in mid-1978 necessitated a lower rate of growth with some economic shake-out and an inevitable increase in unemployment.

In the fisheries sector, to rising fuel costs have been added substantial increases in labour costs accompanied by declining labour /

1/ Changes in regime led to delays and changes in the statistical service which make it difficult to provide trend data for Portugal.

2/ Portugal, Current and Prospective Economic Trends, IMF 1978.

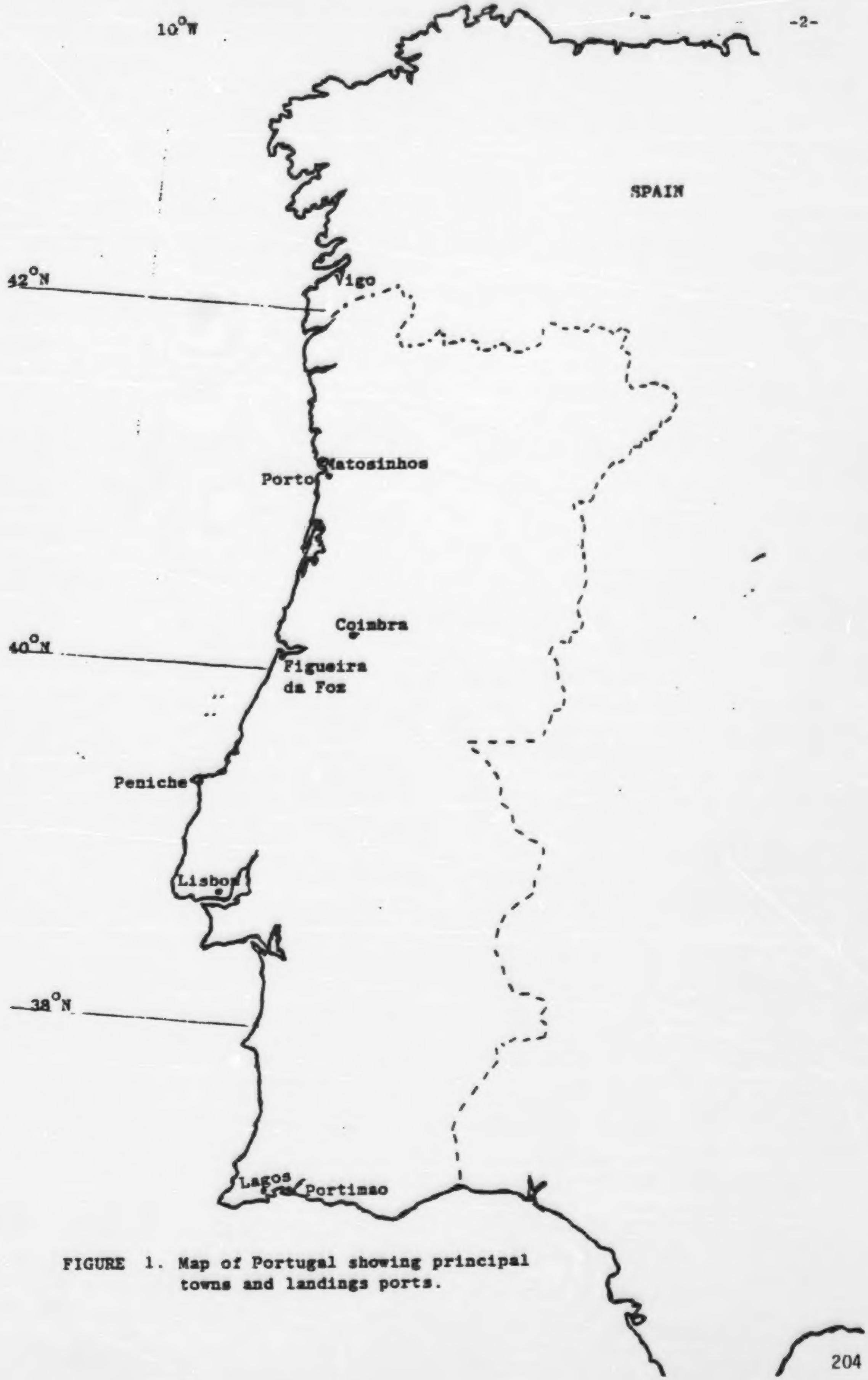


FIGURE 1. Map of Portugal showing principal towns and landings ports.

labour productivity. Inexperienced management was ill-placed to meet the challenge of a changing fisheries regime - entailing changes in catching, processing, marketing and consumption - coinciding with the revolution in the political economy.

Between 1973 and 1978 there was a slight decrease in the number of Portuguese fishermen from 32,879 to 32,341. The gross registered tonnage of the fleet increased by a little under 20 per cent. There was some decline in vessels in the 100 to 1,000 GRT class and a small increase in vessels of over 1,000 tons.

PRODUCTION

Between 1973 and 1977, the quantity of fish landed declined by about 24 per cent to 253,000 tonnes while the value, fed by rapid price inflation, increased by 135 per cent. The value of the landings, expressed as a percentage of the Gross Domestic Product increased by about 26 per cent. In 1977, the value of the landings expressed as a percentage of the GDP at 1.1 per cent, was similar to that of Spain but higher than that of any of the EC countries, the highest of these being Denmark with 0.7 per cent.

Particularly severe was the decline in the distant water cod fishery where landings fell by 42 per cent in the 5 years to 1975. Thus even before restrictions were placed on Portuguese fishing off Newfoundland, Greenland and in the White and Barents Seas landings from these fisheries were on the decrease.

IMPORTS

Portugal is a major exporter of canned sardines, the major markets in 1978 being West Germany, France and the U.K. She is also a net importer of groundfish. With the decline in Portuguese production /

production of dried, salted cod, Portugal has had to rely on imports for this product. However, the import data for 1977 and 1978 shown in Table 1 indicates that the parlous state of the economy has not allowed an increase in imports. Indeed, overall cod imports fell from 34,619 tonnes in 1977 to 22,821 tonnes in 1978. As with Italy, Norway was Portugal's main supplier of cod, providing 59 per cent of imports in 1977 and 58 per cent of the diminished 1978 total. In the same period Spain's share of the market grew whilst Canada's collapsed.

Figures for the first four months of 1979 shown in Table 2 indicate that Canada secured a 6 per cent share of fresh, chilled or frozen cod imports, the principal importer in this category being Iceland with 77 per cent of the market. In the dried, salted or smoked category 93 per cent of imports in the early part of the year were from Norway.

Looking at Portuguese imports as a whole, which fell by 21 per cent between 1977 and 1978, we see that for species other than cod, the main exporter was the U.S.S.R. followed by Spain. Polish exports, however, collapsed completely. The statistics indicate that whilst Newfoundland may experience less competition from the Eastern European producers in the Portuguese market, and, whilst the Northern producers experience supply problems they will remain formidable competitors. In the first ten months of 1979, Norwegian exports of dried or salted fish world wide increased in volume by 33 per cent over the same period in 1978 but the price rose by only 6 per cent.1/

CONSUMPTION /

1/ Norwegian Monthly Bulletin of External Trade.

CONSUMPTION

Portugal is,by tradition,a very large consumer of fish. The disposition of the Portuguese catch has a number of special features. The share of the catch used for canning and curing is higher than that of other countries at similar stages of economic development. In the case of cured fish, this high percentage reflects the traditional importance of the northern Atlantic cod fisheries. In the case of canned fish, chiefly sardines, it is the basis of a substantial export-orientated canning industry.

Table 3 shows that, in 1976, some 55 per cent of the catch was used fresh, 16 per cent cured, 10 per cent canned, 8 per cent used for reduction to fish meal and about 11 per cent frozen. There was a near doubling of the proportion of the catch which was frozen compared with 1972. However, this was still a low level compared with the 31 per cent of the U.K. catch which was frozen in 1976.

In relation to the pattern of consumption by major product type, Portugal most closely resembles Germany with relatively high levels of processed finfish and low levels of shellfish consumption. Consumption of dried, salted cod averaged (in live weight terms) 7.7 kg. per head in the period 1971-74 according to FAO estimates.

PRICES

There is little published information on fish prices in Portugal. A short visit to Portugal did not allow a detailed investigation of supermarkets which now account for a major portion of the retail trade. However, a visit to a number of supermarkets and two retail markets in Lisbon confirmed the view that fish has risen considerably in price.

Although /

Although the price of frozen fish is controlled, austerity measures have led to price increases. In October 1976, the price of codfish and other dried products was revised upwards and further increases have followed since 1977.1/ Visiting one fish shop the parlous state of codfish supplies was summed up on a board advertising "Catfish, just as good as cod."

1/ The importation of fish and the control of codfish prices is rested in the Commissao Reguladora do Commercio.

1: IMPORTS OF MAJOR FISHERY PRODUCTS BY COUNTRY OF ORIGIN

roduct ountry	JANUARY-DECEMBER						% change	
	1977			1978				
	tonnes	000 esc	000 esc/t	tonnes	000 esc	000 esc/t	weight	av. value
Chilled or ,other than								
R.	17,913	148,073	8.27	22,340	244,847	10.96	+ 25	+ 33
	6,328	157,256	24.85	13,489	321,215	23.81	+ 113	- 4
	5,067	33,788	6.67	*	*	N.A.	- 100	N.A.
Africa	4,858	61,185	12.59	1,137	12,688	11.16	- 77	- 11
	1,395	58,117	41.66	*	*	N.A.	- 100	N.A.
ermany	899	5,765	6.41	925	12,378	13.38	+ 3	+ 109
ina	812	13,531	16.66	1,036	31,305	30.22	+ 28	+ 81
erde	694	18,869	27.19	754	29,818	39.55	+ 9	+ 45
	684	11,744	17.17	*	*	N.A.	- 100	N.A.
y	395	6,795	17.20	*	*	N.A.	- 100	N.A.
d	326	10,782	33.07	335	13,786	41.15	+ 3	+ 24
	248	5,394	21.75	2	1,006	503.00	- 99	+>1000
	169	4,979	29.46	*	*	N.A.	- 100	N.A.
	162	7,677	47.39	549	29,382	53.52	+ 239	+ 13
l	110	4,091	37.19	273	7,831	28.68	+ 148	- 23
a	*	*	N.A.	267	11,147	41.75	N.A.	N.A.
ania	*	*	N.A.	143	5,482	38.34	N.A.	N.A.
gua	*	*	N.A.	143	5,777	40.40	N.A.	N.A.
	3,571	57,740	16.17	930	40,525	43.58	- 74	+ 170
	43,631	605,786	13.88	42,323	767,187	18.13	- 3	+ 31
d	20,427	1,094,265	53.57	13,338	842,494	63.16	- 35	+ 18
	12,080	955,585	79.10	8,257	807,045	97.74	- 32	+ 24
	1,339	87,094	65.04	3	386	128.67	- 99	+ 98
	745	36,706	49.27	1,049	62,950	60.01	+ 41	+ 22
	28	1,720	61.43	174	12,199	70.11	+ 521	+ 14
	34,619	2,175,370	62.84	22,821	1,725,074	75.59	- 34	+ 20
ish								
R.	2,088	35,165	16.84	136	3,419	25.14	- 93	+ 49
	1,723	55,679	32.32	328	13,381	40.80	- 81	+ 26
	530	19,937	37.62	180	6,667	37.04	- 66	- 2
ermany	308	3,824	12.42	*	*	N.A.	- 100	N.A.
States	305	9,282	30.43	*	*	N.A.	- 100	N.A.
	123	3,199	26.01	*	*	N.A.	- 100	N.A.
	117	1,613	13.79	*	*	N.A.	- 100	N.A.
an	*	*	N.A.	209	7,395	35.38	N.A.	N.A.
	782	31,974	40.89	292	11,972	41.00	- 63	*
	5,976	160,673	26.89	1,145	42,834	37.41	- 81	+ 39
	84,226	2,941,829	34.93	66,289	2,535,095	38.24	- 21	+ 9

or less than half last digit used

Source: Instituto Nacional de Estatistica -
Boletim Mensal das Estatisticas do
Comercio Externo

TABLE 2: IMPORTS OF FISHERY PRODUCTS FOR HUMAN CONSUMPTION BY MAJOR VARIETY AND COUNTRY OF ORIGIN

Variety Country	JANUARY-APRIL 1979		
	tonnes	000 esc	000 esc/t
Fresh, Chilled or Frozen			
Tuna			
Spain	1,202	52,087	43.33
Other	339	13,823	40.78
Total	1,541	65,910	42.77
Cod			
Iceland	7,359	467,910	63.58
Canada	555	19,879	35.82
Norway	500	37,803	75.61
Other	1,135	70,300	61.94
Total	9,549	595,892	62.40
Sardines			
Spain	3,028	64,928	21.44
Other	979	13,774	14.07
Total	4,007	78,702	19.64
Hake			
U.S.S.R.	3,232	76,539	23.68
Chile	371	11,981	32.29
Other	201	6,658	33.12
Total	3,804	95,178	25.02
Other			
U.S.S.R.	2,705	43,490	16.08
Netherlands	1,002	19,390	19.35
Other	224	6,336	28.29
Total	3,931	69,216	17.61
Total	22,832	904,898	39.63
Dried, Salted or Smoked			
Cod			
Norway	1,430	168,145	117.58
Other	105	4,498	42.84
Total	1,535	172,643	112.47
Other	90	6,378	70.87
Total	1,625	179,021	110.17
Shellfish			
U.S.S.R.	300	7,056	23.52
Other	154	7,896	51.27
Total	454	14,952	32.93
Fish Preparations	8	630	78.75
TOTAL	24,919	1,099,501	44.12

* Nil

Source: I.N.E.

TABLE 3: DISPOSITION OF CATCHES BY PRODUCT TYPE, 1972-76

Percentage of total catch

Product type	1972	1973	1974	1975	1976
Fresh	57.6	55.6	56.7	53.0	55.1
Frozen	6.6	8.2	5.8	8.0	10.7
Cured	12.5	11.0	12.1	14.9	16.3
Canned	15.5	13.2	14.3	13.4	10.3
For Reduction	5.8	10.1	9.5	10.7	7.6
Miscellaneous Purposes	2.0	1.9	1.6	-	-

Source: F.A.O.

PORTUGAL

Some Manufacturers, Packers and Agents of Frozen Foods

Name of Company	Brand and Product
Uniagri-União de Cooperativas Agricolas do Noroeste SCRL 3730 Vale de Cambra	"UNIAGRI": Chicken, meat and fish products
GEL-MAR-Empresa Distribuidora de Produtos Alimentares Travessa da Saude 2 1300 Lisbon	"GEL MAR": Fish and meat products
Iglo-Indústrias de Gelados Rua Cons° Fernando de Sousa 19-14° 1000 Lisbon	"IGLO": Fish products, ice cream puddings
Frigo Produtos Alimenticios Congelados Sociedade Frigorifica de Peniche Pragueira 2520 Peniche	"FRIGO": Fish, vegetables
Redevendas-Rede de Distribuição de Produtos de Consumo Domestico SARL Rua Manuel 8, Monica 17 2795 Carnaxide	"TIA ROSA": Pizza, pastries, pies, meat and fish
Companhia Portuguesa de Congelação Rua Quinta do Almargem 5, 1300 Lisbon	Fish, meat and vegetables
Rissogel-Sociedade Proparadora de Culinária Congelada Lda Rua Dr José A Ferraz 8-A 2745 Belas	Meat and fish products, pies etc.
Sociedade Continental de Alimentação Lda Doca Jardim do Tabaco Avenida Infante D. Henrique 1100 Lisbon (import bulk quantities and pack locally for retail trade)	"FRIGID" "FINDUS"

PORTUGAL

Some Importers of frozen fish and frozen shellfish

Comissào Reguladora do Comércio
de Bacalhau
Doca de Alcàntara
Lisbon 3 - Telex: 16782 CRCB P

José Climaco
Armazen 113, Docapesca
Pedrouços
Lisbon 3

Sociedade Continental de Alimentação Lda
Doca Jardim do Tabaco - 1°
Avenida Infante D Henrique
1100 Lisbon - Telex: 16624 SCALDA P

Socarma SARL
Armagem S. Filipe
Avenida do Mar
Funchal
Madeira

Transportugal Lda
Edificio Castil
Rua Castilho 39-13°
1100 Lisbon - Telex: 13477 DARRAN P

Izidoro Amorim de Sousa Alvim
(shellfish only)
Rua Barão Sabrosa 346-2°E
1900 Lisbon

Companhia Portuguesa de Congelação SARL
Quinta Almargem 5
Lisbon 3

Euromariscos - Sociedade Importadora
e Exportadora de Produtos
Alimentarea, Lda
R. Gomas Freire, 114-2°dto.
1100 Lisbon

Almeida Pinto & Coelho Lda
Avenida Fontes Pereira de Melo
31-6°B
1000 Lisbon

Frigomar-Sociedade de Comercialização
de Produtos Alimentares Lda
Avenida 24 de Julho 82-C
1200 Lisbon - Telex: 12400 CABTX P

Sociedade Frigorifica de Peniche Lda
Rua da Vitoria 53-3
1100 Lisbon

Armazéns José Luis da Costa
Rua de S. Julião 70
1100 Lisbon

Mariscos da Trindade Lda (shellfish
only)
Rua Nova da Trindade 11G
1200 Lisbon

Sopox-Soc. Port. de Exportação
e Importação
Avenida da Republica 47-4°E
1000 Lisbon

Formar Lda
Travessa Conde da Riberia 16A
1300 Lisbon

Some larger supermarket chains and Companies running supermarkets

Supa-Supermercados Pão de Acucar
Avenida de Ceuta 43-1°
1300 Lisbon

Supermercados Expresso
Avenida António Augusto de Aguiar 32-A
Lisbon 1

Supermercados A C Santos SARL
Travessa Teixeira Junior 1
Lisbon 3

Invictos-Supermercados do Norte
Rua Justina Teixeira 501
Oporto 4

Supermercados Modelo SARL
Rua Diogo Couto 1-8°
Lisbon 2

Spar-Soc. Promotora de Vendas
Avenida Elias Garcia 59-4°
Lisbon 1

Supermercado Villares
Rua Formosa 345
Oporto 1

Belsol Supermercados Lda
Avenida 5 de Outubro 51
Amadora

Supermercados Bombarato
Rua Inácio Sousa 8 r/c
1500 Lisbon

Supermercado Saldanha
Praça Duque Saldanha 31-B
Lisbon 1

Armazens da Matinha Lda (Cash & Carry)
Rua Vale Formoso de Baixo 110
Lisbon 6

Supermercados Nutripol-
Sociedade Portuguesa de Supermercados
Rua Ernesto Silva 14
1300 Algés

Supermercado Bach
Rua das Pretas 13
Funchal
Madeira

Superpracas Regedor Estab. de
Alimentação SARL
Avenida Antonio Augusto de Aguiar
32-1º
Lisbon 1

Supermercados Celeiro-Dantas
& Vale Lda
Rua 1º de Dezembro 67
Lisbon 2

Muzangala SARL (Cash & Carry)
Calçada Chafariz Esq
Avenida Fontes Pereria de Melo
2795 Linda-a-Velha

Manutenção Militar (Military-
Rua do Grilo 16 Supermarket
Lisbon 6 Cooperatives)

Supermercados Manteiga de António
de Sousa Manteiga Sucrs.
Rua Marquês da Paia 2-8º
Ponta Delgada
S. Miguel, Acores

The Spanish Market for Groundfish

INTRODUCTION

Spain is one of the highest per capita consumers of fish in Western Europe. Changes in the international fisheries regime do not now allow the large national fleet to satisfy this demand.

Agreements by entrepreneurs with developing and third countries will increasingly give way to a reliance on imports as such countries strive to exploit more of their own resources.

Likely entry of Spain into the European Community will complicate the position for the EC catching sector in North East Atlantic waters but will allow for increased penetration of the Spanish market.

Madrid and Barcelona are the two most important population centres at 3.7 millions and 1.9 millions respectively. Madrid receives its fish supplies from the northern ports of Vigo and La Coruna and the southern ports of Malaga, Algeciras, Cadiz, and Huelva. Market preference is for colder water species. Barcelona receives its supplies from the north and east.

In recent years the Spanish economy has been characterised by slow growth, falling investment, inflation, a weak currency and substantial unemployment. With a more stable political environment and potential membership of the EC prospects for a return to a scenario of growth are good.

The Spanish fishing fleet is the third largest in the world after those of Russian and Japan. The fleet has been expanded and modernised very rapidly since the first of a series of five year plans for the industry in 1964. Although Spanish vessels of /

of similar size carry a larger crew than in some of the more northern countries of Europe, at 112,000, the number of Spanish fishermen is over five times the number in the U.K.

PRODUCTION

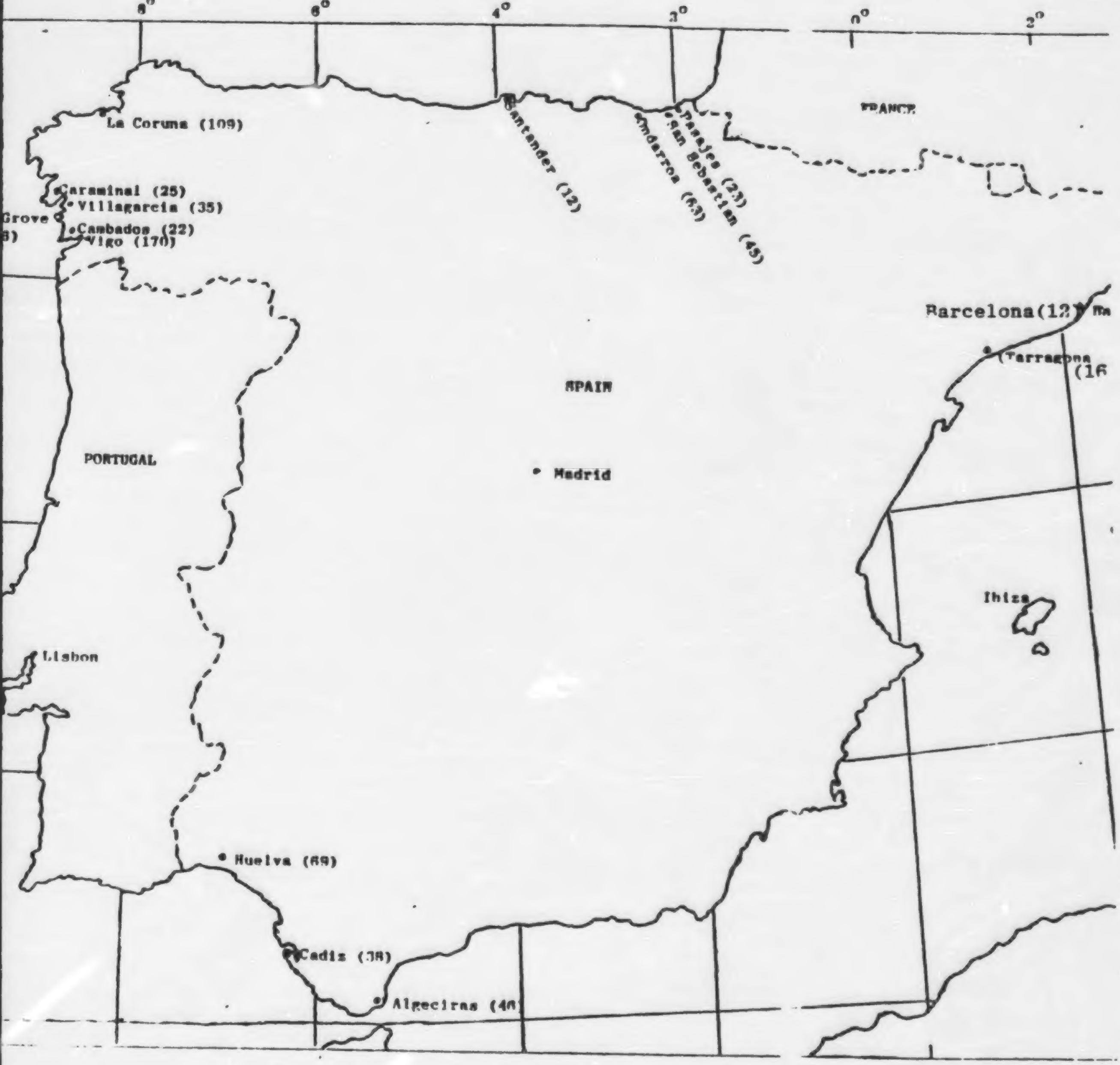
Vigo is Spain's most important port, followed by La Coruna, Las Palmas (Canaries) and Huelva. Together these four ports account for some 40 per cent of Spanish landings.

Table 1 shows Spanish landings and the change in average values of major varieties in 1971-1975. Unfortunately Spanish landing data is very slow to be published. Hake, which had the most significant landings in 1975, experienced a sharp decline in importance to only 94,900 tonnes in 1977. This would seem to be a direct result of limitations on effort in the waters of third countries and over-fishing in the Bay of Biscay. The Spanish fisherman has traditionally hunted several species of hake. European hake (Merluccius merluccius) derives from the south west of Britain, south and west of Brittany and off the Spanish coastline, while black hake (Merluccius senegalensis cad.) is found off Morocco and is only caught by vessels from Huelva and Algericas. Over 90 per cent of cape hake comes from the South East Atlantic and is caught by trawlers from Galacia.

However, the decline in supply has had a positive effect on the unit value of the fish, with the price of large hake increasing by 213 per cent in the period 1975-77, and small fish by 119 per cent (although these figures must be treated with caution as unknown proportions of the catch are either filleted or whole (gutted)).

The /

gure 1: Map of mainland Spain and Mediterranean islands showing landings ('000 tonnes) in 1975



The cod fishery used to be of the greatest importance, but landings have declined dramatically until there was only 400 tonnes available in 1977. In former years the cod was wet salted on board Spanish vessels and further processed on shore for sale locally or for export.

Megrim (Lepidorhombus whiffiagonis) is the only flat fish landed on a large scale in Spain with some 13,000 tonnes in 1977.

IMPORTS

Forced back into her own waters, Spain has had to concentrate on the pelagic species suitable for canning. Spain's positive trade balance has only been maintained by the extensive export of canned products, with 1978 showing a deficit in the trade of fresh, chilled or frozen fish and salt, dried or smoked fish. The declining overall position is shown in Table 2.

Table 3 shows the changing pattern of imports for various products in 1977 and 1978. Within an 85 per cent increase in the fresh,chilled or frozen fish category (excluding fillets) there was a 158 per cent increase in hake imports to 32,000 tonnes and a 97 per cent increase in sole imports to over 7,000 tonnes. There was also a small increase in the import of hake fillets but total fillet imports were less than 5,000 tonnes in 1978 indicating the current smallness of that sector. There was, however a 26 per cent increase in dried, salted or smoked cod. Figures covering the period January to October 1979 show that whole hake imports were already greater than for the year 1978. Hake fillet imports were double the 1978 figure and dried, salted or smoked cod imports had reached 23,019 tonnes against the 1978 figure of 17,433 tonnes.

In /

In 1977 of Spain's imports of dried, salted or smoked fish, 44 per cent came from Denmark, 39 per cent from Iceland and 14 per cent from Norway, illustrating the competition which Newfoundland faces in this market.

Turning specifically to cod and hake the latest available yearly figures given in Table 4 show that in 1978 there was a very substantial increase in frozen hake imports, over half coming from Argentina. South Korea also supplied nearly 4,000 tonnes of frozen hake. There was, however, only a six per cent increase in frozen hake fillet imports. Dried, salted or smoked cod imports rose by 25 per cent to 17,433 tonnes. Imports from Iceland were up 39 per cent and from Denmark 22 per cent.

Spanish importers are very concerned about quality. All fish must be graded and correctly weighed. As most fish in Spain is sold unfilleted, presentation is important. Fish sent to Spain, therefore must be carefully gutted.

DISTRIBUTION

The distribution of fishery products around mainland Spain has been determined by several factors including the pattern of landings, the road and rail networks and local population densities and consumer preferences. However, it seems that a proximity to major urban centres has not played a large part in the siting of major fishing ports. This has often led to a requirement for fish to travel great distances to the place of consumption.

Fish /

Fish arriving in Madrid and Barcelona provinces are used partly to supply these provinces and partly to supply the neighbouring countryside. As is to be expected, per capita consumption in the two largest cities is not large, by Spanish standard, and is declining, the major areas concerned being those on the coast. Much of central Spain is supplied with fish redistribution from Madrid.

Figure 1 shows the main channels of distribution for frozen products. It indicates that some frozen fish is distributed through central city markets where it is purchased by brokers or by representatives of producing companies licensed to operate in the city markets. However, this accounts for only a small proportion of the total movement of frozen fish with about 90 per cent, in 1972, being contracted landings from freezer vessels going directly to cold stores. By the use of refrigerated trucks the produce is then transported to redistribution or consumption centres.

CONSUMPTION

Per capita consumption of fish in Spain in 1977 totalled 20.78 kgs. (product weight) of which 18.32 kgs. was fresh or chilled and the remainder frozen. Spain is a small consumer of processed (cured, canned etc.) fin fish with a high level of consumption of shellfish. The importance of shellfish in the diet is emphasised by the large and diverse display of shellfish in retail and wholesale markets and by the fact that shellfish forms an integral part of many traditional dishes, for example, paella.

Amongst /

Amongst frozen products, the highest level of consumption is of hake. Traditionally in Spain, in terms of consumer preference, hake has more or less occupied the place of cod in England.

The popularity of salted cod has declined with increased real incomes, and a greater availability of the fresh and frozen varieties.

The Spanish housewife had traditionally placed a premium on high quality fresh fish. There are indications with with declining fresh supplies the housewife is showing a greater acceptance of frozen products. Some frozen fish is thawed and sold as fresh. Rising real incomes should lead to increased purchases of prepared dishes and wider ownership of home freezers.

PRICES

The inflationary effects of increased costs which have hit the world's fishing industries in recent years have affected Spain as much as anywhere. Tables 5 and 6 show that there have been marked increases in average values of species caught in both distant waters and middle and near waters. The value of cod fished in distant waters, and then frozen ready for salting, quadrupled in the period 1974-77, with the increment in the price of filleted large hake being even greater. A similar pattern is visible with regard to the values of species obtained in the middle and near water fisheries. Most significant is the 148 per cent increase in the value of megrim in the 4 years 1974 to 1977. This suggests a possible opportunity for Newfoundland flounder in Spain.

That /

That inflation has been felt throughout the fishing industry is shown in the increased prices for albacore, sea bream, cuttlefish and cockles where prices all expanded by more than 100 per cent.

Figures for import prices found in Table 3 show that of the main groundfish imports the largest price increases in 1978 over 1977 were for hake and sole of which species imports grew most. The price of hake rose by 18.7 per cent that of sole by 20.8 per cent.

CONCLUSION

It has been seen that declining catches have had a marked effect on Spain's balance of trade in fish and fishery products. During most years between 1972 and 1977 and for most product types, Spain enjoyed a favourable balance of trade in these products destined for human consumption (excluding meal and oil). Between 1977 and 1978, however, imports of all major product types increased and exports declined. In view of the supply position discussed above, it seem to be inevitable that this trend will continue provided that increasing prices do not create a resistence to fishery products among Spanish housewives. Thus Spain should offer a favourable market for exporters especially for products with which Spanish consumers are familiar such as cod, hake, megrims, soles, monkfish, squid, spider crabs and Norway lobsters. Although domestic quality standards are reportedly not always of the best, Spanish importers insist on very high quality standards. Most of the demand is for fresh or chilled, rather than frozen, products or, in the case of crabs, live products. However, this should not be regarded as an insurmountable obstacle, with the signs being that the Spanish consumer is increasingly willing to accept the frozen variety; a movement which could expand given price advantage.

TABLE 1: SPANISH LANDINGS[1/] AND CHANGE IN AVERAGE VALUE 1977 OVER 1975

Variety	1975	1977	% change: 1975 to 1977
	'000 t.	'000 t.	
Sub total hake[2/]	189.2	97.9	+ 128
Large	53.1	12.6	+ 213
Small	136.1	82.3	+ 119
Sardines	166.5	189.2	+ 26
Horse mackerel	93.6	120.3	+ 36
Anchovy	51.8	82.2	+ 19
Cod	36.6	0.4	+ 77
Mackerel	34.9	33.1	+ 80
Tuna (not specified)	29.6	9.5	+ 103
Blue whiting	26.2	22.4	+ 77
Albacore	19.0	27.1	+ 86
Palometa	16.8	13.7	+ 89
Anglerfish	14.8	14.9	+ 59
Megrim	14.7	12.6	+ 101
Common sea bream	13.2	11.4	+ 80
Bogue	8.7	9.4	+ 55
Pouting	8.5	6.3	+ 91
Skipjack tuna	6.7	0.7	+ 26

[1/] Excluding trans-shipments. Table refers to landings greater than 6,000 tonnes in 1975.

[2/] Includes whole (gutted) and fillets in unspecified amounts

Source: Spanish Government Statistics

TABLE 2: SPANISH TRADE BALANCE (EXPORTS-IMPORTS) IN FISH AND FISHERY PRODUCTS (1972-78)

'000 tonnes, product weight

Product	1972	1973	1974	1975	1976	1977	1978
Fish, fresh chilled or frozen	- 3.4	-21.0	-21.4	+ 3.8	+24.2	+10.2	-33.5
Fish, salted, dried or smoked	+ 12.8	+21.9	- 8.4	+ 4.2	+ 8.9	- 2.4	- 7.0
Crustaceans and molluscs, fresh, frozen, dried, salted etc.	+ 36.8	- 1.2	- 9.2	-11.2	+ 4.4	+10.2	- 4.5
Fish products and preparations, whether or not in airtight containers	+ 41.3	+38.6	+43.2	+39.0	+54.1	+49.5	+52.5
Crustaceans and molluscs whether or not in airtight containers	+ 6.3	+ 5.0	+ 3.6	+ 4.2	+ 5.1	+ 5.2	+ 4.5
Sub-total: for human consumption	+ 93.8	+43.3	+ 7.8	+40.0	+96.7	+72.7	+12.0

Source: F.A.O. and Official Statistics

ABLE 3: IMPORTS OF FISHERY PRODUCTS FOR HUMAN CONSUMPTION BY MAJOR VARIETY

Variety	JANUARY-DECEMBER						% change	
	1977			1978				
	tonnes	million pts	000 pts/t	tonnes	million pts	000 pts/t	weight	av. value
resh,Chilled or rozen (ex.Fillets)								
Salmon	352	158.98	451.65	280	133.99	478.54	- 20.5	+ 6.0
Sole	3,726	379.58	101.87	7,350	904.26	123.03	+ 97.3	+ 20.8
Hake	12,550	859.10	68.45	32,365	2630.75	81.28	+157.9	+ 18.7
Sardine	3,964	52.78	13.31	2,362	38.47	16.29	- 40.4	+ 22.4
Anchovy	2,590	50.15	19.36	5,464	149.85	27.42	+111.0	+ 41.6
Yellowfin tuna	478	53.91	112.78	1,902	176.88	93.00	+297.9	- 17.5
Bigeye tuna	3	0.30	100.00	2,701	205.71	76.16	+1000.0	- 23.8
Albacore	2,207	180.92	81.98	316	30.50	96.52	- 85.7	+ 17.7
Other	13,452	1061.43	78.90	19,899	1631.77	82.00	+ 47.9	+ 3.9
Total	39,322	2797.15	71.13	72,639	5902.18	81.25	+ 84.7	+ 14.2
resh,Chilled or rozen Fillets								
Hake	3,984	298.06	74.81	4,240	376.87	88.88	+ 6.4	+ 18.8
Other	3,181	237.83	74.77	557	71.25	127.92	- 82.5	+ 71.1
Total	7,165	535.89	74.79	4,797	448.12	93.42	- 33.0	+ 24.9
ried,Salted or moked								
Cod	13,882	1921.99	138.45	17,433	2694.51	154.56	+ 25.6	+ 11.6
Other	1,911	260.00	136.05	1,673	255.90	152.96	+ 12.5	+ 12.4
Total	15,793	2181.99	138.16	19,106	2950.41	154.42	+ 21.0	+ 11.8
hellfish								
Spider crab	1,638	114.88	70.13	1,493	134.17	89.87	- 8.9	+ 28.1
Prawns	6,989	1573.66	225.16	6,410	2132.84	332.74	- 8.3	+ 47.8
Nephrops	1,328	353.45	266.15	1,303	440.52	338.08	- 1.9	+ 27.0
Oysters	511	109.88	215.03	490	156.58	319.55	- 4.1	+ 48.6
Venus clam	4,518	92.74	20.53	23,484	518.13	22.06	+419.8	+ 7.5
Clam	812	120.35	148.21	1,224	185.39	151.46	+ 50.7	+ 2.2
Octopus	865	57.71	66.72	2,211	170.48	77.11	+155.6	+ 15.6
Squid	8,347	1114.46	133.52	8,527	1402.19	164.44	+ 2.2	+ 23.2
Flying squid	7,615	248.72	32.66	20,296	1310.14	64.55	+166.5	+ 97.6
Cuttlefish	4,042	276.33	68.36	4,640	408.58	88.06	+ 14.8	+ 28.8
Other	12,319	1122.12	91.09	15,782	1491.96	94.54	+ 28.1	+ 3.8
Total	48,984	5184.30	105.84	85,860	8350.98	97.26	+ 75.3	- 8.1
ish Preparations	465	58.89	126.65	430	122.61	285.14	- 7.5	+125.1
Shellfish Preparations	2,681	455.43	169.87	2,264	417.48	184.40	- 5.6	+ 8.6
OTAL	114,410	11213.65	98.01	185,096	18191.78	98.28	+ 61.8	+ 0.3

Source: Ministerio de Hacienda - Estadistica Mensual
del Commercio Exterior

TABLE 4: IMPORTS OF HAKE AND COD 1977 and 1978

	1977			1978			% Change	
	tonnes	000 Psts	000 Psts/t	tonnes	000 Psts	000 Psts/t	Weight	A va
Hake								
Fresh								
Total	1,333	225,464	16,914	1,813	385,620	15,754	+ 36	-
France	485	76,746	15,824	1,257	291,312	23,175	+ 159	+
Frozen								
Total	11,217	633,638	5,649	30,552	2,245,128	7,349	+ 172	+
Argentina	6,818	372,439	5,463	17,305	1,061,153	6,132	+ 154	+
South Korea	220	20,109	9,140	3,924	426,362	10,865	+ 1684	+
Fillets Frozen								
Total	3,984	298,058	7,481	4,240	376,868	8,888	+ 6	+
Argentina	3,016	223,043	7,395	3,579	297,664	8,317	+ 19	+
Cod								
Dried, Salted or Smoked								
Total	13,699	1,898,226	13,857	[illegible],433	2,694,508	15,456	+ 27	+
Iceland	5,843	787,765	13,482	8,110	1,156,754	14,263	+ 39	+
Denmark	5,811	810,217	13,943	7,102	1,149,551	16,186	+ 22	+

FIGURE 1: DISTRIBUTION CHANNELS FOR FROZEN FISH

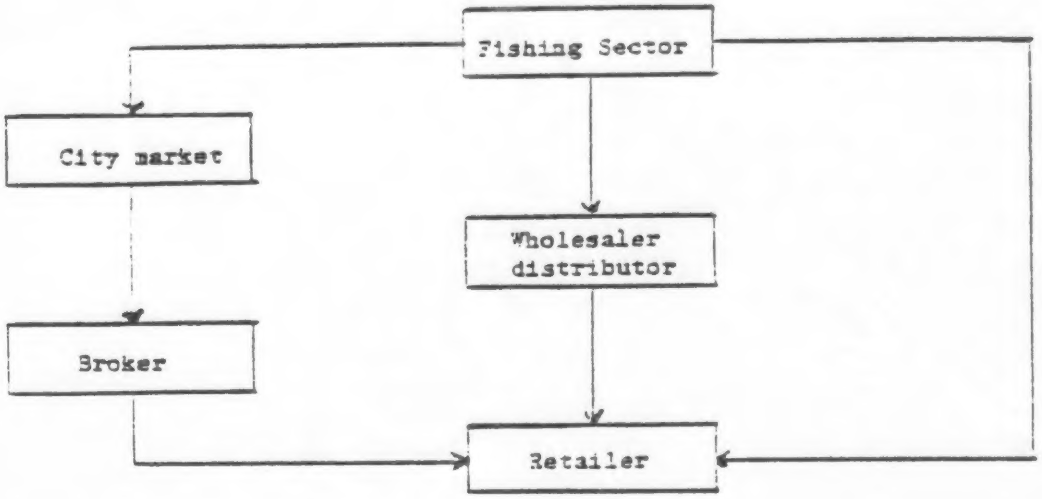


TABLE 5: AVERAGE VALUES (IN '000 PES/TONNE) OF MAJOR PRODUCTS LANDED BY THE DISTANT WATER FISHERY, 1974-77

Product type	1974	1975	1976	1977	% change 1974 to 1977
Frozen for salting					
Cod	18.3	16.5	67.9	73.9	+303
Frozen, fish					
Large hake, whole	32.9	36.5	64.1	98.8	+201
filleted	19.6	19.4	62.3	85.5	+336
Small hake	24.7	25.1	47.6	69.4	+180
Tuna, not specified	42.9	40.5	45.7	63.9	+ 49
Skipjack	35.1	30.9	33.7	48.3	+ 38
Frozen shellfish					
Deepwater shrimp	281.3	353.7	384.7	427.4	+ 52
Camarote prawn	218.6	235.9	233.2	322.4	+ 47
Squid	63.5	62.6	83.3	102.6	+ 62
Cuttlefish	41.0	45.5	50.4	52.8	+ 29
Octopus	35.0	39.6	45.5	47.0	+ 34

Source: Spanish Government statistics

TABLE 5: AVERAGE VALUES (IN '000 PES/TONNE) OF MAJOR SPECIES[1/] OF FISH AND SHELLFISH LANDED BY THE NEAR AND MIDDLE WATER FISHERIES, 1974-77

Species	1974	1975	1976	1977	% change 1974 to 1977
Albacore	60.2	74.2	90.1	143.3	+138
Anchovy	39.3	37.1	34.6	45.9	+ 17
Anglerfish	60.3	69.8	83.4	115.6	+ 92
Blue whiting	18.9	19.3	28.8	35.6	+ 88
Common sea bream	52.0	59.6	78.3	111.8	+115
Hake, large	149.6	56.7	187.3	268.3	+ 79
small	80.2	92.0	116.2	163.7	+104
Horse mackerel	8.2	8.7	9.5	12.5	+ 53
Mackerel	10.2	10.6	13.4	19.8	+ 94
Megrim	51.9	61.5	79.9	128.8	+148
Palometa	32.1	28.1	39.1	55.3	+ 72
Sardine	11.5	11.6	11.0	15.0	+ 30
Tuna, not specified	38.6	31.4	52.1	77.0	+ 99
Deep water prawn	369.7	364.3	392.9	428.2	+ 16
Norway lobster	254.8	249.9	351.0	376.0	+ 48
Carpet shell	51.5	68.3	86.0	97.5	+ 89
Cockle	13.6	23.8	40.3	28.9	+113
Cuttlefish	51.0	67.1	91.0	115.2	+126
Mussel, wild	4.1	6.7	6.8	+	+
cultured	6.4	6.3	6.6	7.9	+ 23
Octopus	33.2	37.1	47.5	60.3	+ 82
Squid	78.3	94.7	128.8	158.0	+102

1/ In 1975, fish species over 5,000 tonnes,

Source: Spanish Government statistics

SPAIN

Some Leading Importers of Frozen Fish

PESCANOVA, S.A. Chapela, Vigo.	Tel: 986 21 57 91 Telex: 83072 PESVA E	Frozen fish and shellfi
AUXILIAR CONSERVERA, S.A., AUCOSA, Av. Orillamar, 6, Vigo.	Tel: 986 29 18 58	Frozen fish
MAR, S.A., Av. Orillamar S/n, Vigo.	Tel: 986 29 71 68 Telex: 83105 FMAR E	Frozen fish
IGNUPESCA, Llorente, 14, Vigo.	Tel: 986 20 05 57	Frozen fish
S.A. EDUARDO VIEIRA, Avda. Orillamar, 1, Vigo.	Tel: 986 23 25 08 29 34 00	Frozen fish
ALIMAR 2000, S.A., Puente del Pasaje s/n, La Coruna.	Tel: 981 28 40 99 Telex: 82179 BONJC E	Frozen fish and shellfi
CELTPESCA, Maestro Mateo S/n, Vigo.	Tel: 986 21 34 76 22 32 06	Shellfish and frozen fi
Isidoro Callejo, EL GROVE, Pontevedra.	Tel: 986 73 07 59	Shellfish and fish

SPAIN

Other Leading Importers of Fish and Shellfish
(product not stated)

BAJAMAR
Avda José Antonio 78,
Madrid.
Tel: 258 5903
Telex 22818 BAMAR E

Alvarez Entrena S.A.
Plaza de Campillo-Mundo Nuevo s/n,
Madrid.
Tel: 266 6400
Telex 23576

Agustin Soriano Llorca
Passo de Yeserias 32,
Madrid.
Tel: 695 8362
Telex 42282 ASOL E

MAREAS S.A.
Narvaes 47,
Madrid.
Tel: 274 4391/6318
Telex: 23502 and 23401

Taiyo Espana S.A.
Rios Rosas 42,
Madrid.
Tel: 234 0704
Telex: 22664 TAIYO E

Pescafina S.A.
Passo Pintor Rosales 38
Madrid.
Tel: 241 6096
Telex: 27700 SALOM E

CIEISA,
Alcalá 30-32,
Madrid.
Tel: 232 0578
Telex 22284 BAHER E 43635 CIE E

Manuel Izaguirre,
Rodas 18,
Madrid.
Tel: 468 1812/1941
Telex: 434401 MIZ E

Sangar S.A.
Avda Menendez Pelayo 63
Madrid.
Tel: 274 1215
Telex 42160

Montoliu Frigorificos S.A.
Carrera en Corts 46
Valencia.
Tel: 334 7400
Telex: 64103 FRIM E

Delfin Gómes de la Flor,
Plaza de los Mosterses 1,
Madrid
Tel: 242 0903 247 1418
Telex: 42197 FRID E

APPENDIX A

EXCHANGE RATES - NATIONAL UNITS PER US DOLLAR

	Belgium	Denmark	Eire	Finland	France	G.F.R.	Greece	Iceland	Italy	Nether-lands	Norway	Portugal	Spain	Sweden	U.K.	Canada
	Franc	Krone	Pound	Markka	Franc	DM	Drachma	Krona	Lira	Gulden	Krone	Escudo	Peseta	Krona	Pound	Dollar
1977	35.84	6.0032	0.573	4.029	4.913	2.32	37.20	198.87	882.39	2.45	5.32	38.28	75.07	4.48	0.573	1.064
1978																
J	32.84	5.7743	0.517	4.022	4.717	2.12	36.40	214.69	871.08	2.27	5.15	40.14	80.64	4.67	0.517	1.1011
F	32.30	5.6742	0.516	4.090	4.839	2.08	36.55	246.90	859.52	2.33	5.27	40.23	80.63	4.64	0.516	1.1132
M	31.66	5.5973	0.525	4.180	4.714	2.03	37.12	253.74	854.94	2.18	5.32	40.76	80.02	4.61	0.524	1.1256
A	31.78	5.6082	0.541	4.193	4.585	2.04	37.47	254.65	857.68	2.18	5.36	41.42	80.15	4.60	0.540	1.1416
M	31.88	5.7000	0.550	4.281	4.651	2.11	38.03	258.37	870.22	2.25	5.45	45.15	81.10	4.66	0.550	1.1188
J	32.69	5.6438	0.544	4.285	4.580	2.08	37.57	259.58	859.36	2.24	5.40	45.74	79.42	4.61	0.545	1.1216
J	32.38	5.6037	0.528	4.209	4.439	2.05	37.03	259.80	846.66	2.22	5.30	45.55	77.61	4.54	0.528	1.1245
A	31.51	5.4986	0.515	4.113	4.360	2.00	37.10	259.80	837.26	2.16	5.26	45.39	74.90	4.45	0.515	1.1404
S	31.06	5.4336	0.511	4.076	4.362	1.97	37.32	306.71	829.92	2.14	5.21	45.45	73.43	4.42	0.511	1.1665
O	29.08	5.1246	0.499	3.939	4.224	1.84	36.31	307.45	811.39	2.00	4.93	44.64	69.81	4.29	0.498	1.1826
N	29.95	5.2658	0.509	4.008	4.362	1.90	37.22	313.85	843.96	2.05	5.06	46.44	71.27	4.37	0.509	1.1728
D	29.81	5.2514	0.504	4.012	4.320	1.88	33.10	317.70	842.18	2.04	5.10	46.47	71.00	4.38	0.504	1.1800
1979																
J	29.15	5.1282	0.499	3.967	4.241	1.85	36.26	319.90	836.03	1.99	5.07	46.74	69.91	4.35	0.499	1.1896
F	29.27	5.1476	0.499	3.970	4.275	1.86	36.53	322.80	840.08	2.01	5.09	47.44	69.26	4.36	0.499	1.1955
M	29.43	5.1917	0.491	3.983	4.288	1.86	36.69	324.03	841.22	2.01	5.10	47.99	68.97	4.37	0.491	1.1741
A	30.03	5.2729	0.494	4.012	4.351	1.89	37.07	322.55	843.90	2.05	5.14	48.81	67.97	4.39	0.482	1.1463
M	30.54	5.3892	0.503	4.013	4.407	1.91	37.30	333.32	851.85	2.08	5.19	49.54	66.07	4.39	0.486	1.1556
J	30.25	5.4284	0.500	3.973	4.365	1.88	37.18	341.24	845.26	2.07	5.16	49.50	66.08	4.34	0.474	1.1723
J	29.21	5.2431	0.483	3.851	4.245	1.82	36.67	350.27	820.50	2.01	5.04	48.65	66.10	4.22	0.442	1.1634
A	29.29	5.2719	0.486	3.845	4.258	1.83	36.84	368.75	818.40	2.01	5.03	49.15	66.05	4.22	0.447	1.1703
S	28.85	5.1930	0.478	3.821	4.200	1.80	36.89	379.27	811.13	1.98	4.98	49.27	66.04	4.19	0.455	1.1552
O	28.85	5.2314	0.480	3.780	4.197	1.79	37.71	384.85	825.38	1.98	4.97	49.91	66.13	4.21	0.466	1.1748
N	28.73	5.2622	0.480	3.794	4.161	1.77		391.13	825.50	1.98	5.02	50.24	66.42	4.23	0.470	1.1796
D																

Source: O.E.C.D.

APPENDIX B

WEIGHT UNITS USED IN THE TEXT:

Tonnes: metric tons.

Catch weight (live weight): this is the weight of the fish or shellfish as it is removed from the water and includes the weight of non-edible parts such as the head, guts, bones, fins, skin, tail and, in the case of shellfish, the shell. Quotas are usually stated in the weight unit and it is the one most commonly used unit in fish stock assessment.

Landed weight: this is the weight after handling on board to the condition that the fish and shellfish are landed for first sale. Since pelagic fish are rarely gutted at sea, the landed weight is usually the same as the catch weight. This is usually also true in the case of molluscs. Demersal fish are usually gutted at sea hence the landed weight would represent the live weight less the weight of the guts. In the operations of freezer trawlers, some fish may be filleted at sea and the landed weight is the weight of the fillets. Some species of crustaceans are headed at sea hence the landed weight represents only the weight of the tails. Other crustaceans are landed whole.

Product weight: this is the weight of the product when it is involved in trade. In the case of foreign landings of pelagic fish (considered as imports), the product weight would normally be the same as the live weight. In other circumstances, for example, foreign landings of demersal fish, the product weight is the same as the landed weight. In the case of imports by lorry, cargo boat etc., the exporting country usually attempts to get some value added through further processing hence the product weight /

weight could be the weight of fillets, blocks, steaks, contents of cans and cured fish which usually include the backbone but often not the head, although, for example, the head may be included in non-filleted kippers. To some extent, conversion factors can be applied to change product weights to live or landed weights but this is a tedious operation since different products and, in some cases, different species have different conversion factors. In the case of exports and imports the task is complicated by the fact that different countries use different conversion factors and in some cases no conversion factors are available or they may be unreliable. In addition, the factors may change as improving technology produce higher yields.

Edible weight: this is the weight of the part of the fish and shellfish which is actually eaten. This is almost always the weight of the flesh recovered during processing. In a few cases, such as canned salmon, etc. the bones can also be eaten and their weight would be included with that of the flesh as part of the edible weight equivalent.